UNITED STATES
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, 2019**

OR

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

For the transition period from to

Commission file number **1-12744**

MARTIN MARIETTA MATERIALS, INC.
(Exact name of registrant as specified in its charter)

North Carolina	**56-1848578**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
2710 Wycliff Road, Raleigh, North Carolina	**27607-3033**
(Address of principal executive offices)	(Zip Code)

(919) 781-4550
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock (par value $.01 per share)	**MLM**	**New York Stock Exchange**

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 during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes ☒ No ☐

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐ No ☒

As of June 28, 2019, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was **$12,807,658,433.72** based on the closing sale price as reported on the New York Stock Exchange.

Indicate the number of shares outstanding of each of the issuer's classes of common stock on the latest practicable date.

Class	Outstanding at February 14, 2020
Common Stock, $.01 par value per share	**62,198,867 shares**

DOCUMENTS INCORPORATED BY REFERENCE

Document	Parts Into Which Incorporated
Proxy Statement for the Annual Meeting of Shareholders to be held May 14, 2020 (Proxy Statement)	Part III

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PART I

ITEM 1 – BUSINESS

General

Martin Marietta Materials, Inc. (the "Company" or "Martin Marietta") is a natural resource-based building materials company. The Company supplies aggregates (crushed stone, sand and gravel) through its network of more than 300 quarries, mines and distribution yards in 27 states, Canada, the Bahamas and the Caribbean Islands. In the western United States, Martin Marietta also provides cement and downstream products, namely, ready mixed concrete, asphalt and paving services in markets where the Company has a leading aggregates position. Specifically, the Company has two cement plants in Texas, and ready mixed concrete and asphalt operations in Texas, Colorado, Louisiana, Arkansas, and Wyoming. Paving services are exclusively in Colorado. The Company's heavy-side building materials are used in infrastructure, nonresidential and residential construction projects. Aggregates are also used in agricultural, utility and environmental applications and as railroad ballast. The aggregates, cement, ready mixed concrete and asphalt and paving product lines are reported collectively as the "Building Materials" business. The Company also operates a Magnesia Specialties business with production facilities in Michigan and Ohio. The Magnesia Specialties business produces magnesia-based chemical products that are used in industrial, agricultural and environmental applications. It also produces dolomitic lime sold primarily to customers in the steel and mining industries. Magnesia Specialties' products are shipped to customers worldwide.

The Company was formed in 1993 as a North Carolina corporation to serve as successor to the operations of the materials group of the organization that is now Lockheed Martin Corporation. An initial public offering of a portion of the Company's common stock was completed in 1994, followed by a tax-free exchange transaction in 1996 that resulted in 100% of the Company's common stock being publicly traded.

The Company completed over 90 smaller acquisitions from the time of its initial public offering until the present, which allowed the Company to enhance and expand its aggregates-led presence in the building materials marketplace. This included an exchange of certain assets in 2011 with Lafarge North America Inc. ("Lafarge"), pursuant to which it received aggregates quarry sites, ready mixed concrete and asphalt plants, and a road paving business in and around the metropolitan Denver, Colorado, and the I-25 corridor, in exchange for which Lafarge received properties consisting of quarries, an asphalt plant and distribution yards operated by the Company along the Mississippi River (called the Company's "River District Operations") and a cash payment.

The business has developed further through the following transactions over the past few years.

In 2014, the Company completed the acquisition of Texas Industries, Inc. ("TXI"), further augmenting its position as a leading supplier of aggregates and heavy building materials. TXI was a major supplier of natural aggregates in Texas, in northern Louisiana and, to a lesser extent, in Oklahoma and Arkansas. TXI was the then largest supplier of cement and ready mixed concrete products in Texas. TXI enhanced the Company's position as an aggregates-led, low-cost operator in large and fast-growing geographies in the United States, adding 800 million tons of aggregates to the Company's reserves, and provided high-quality assets in cement and ready mixed concrete.

In connection with the TXI acquisition, the Company acquired nine quarries and six aggregates distribution terminals located in Texas, Louisiana and Oklahoma. The Company also acquired two cement plants in Midlothian, Texas, south of Dallas, and Hunter, Texas, north of San Antonio, and approximately 120 ready mixed concrete plants, situated primarily in three areas of Texas (the Dallas/Fort Worth/Denton area of north Texas; the Austin area of central Texas; and from Beaumont to Texarkana in east Texas), in north and central Louisiana and in Southwestern Arkansas. As part of an agreement in conjunction with the United States Department of Justice's review of the transaction, the Company divested its North Troy Quarry in Oklahoma and two related rail distribution yards in Dallas and Frisco, Texas.

TXI was also a cement producer in California. In 2015, the Company divested its California cement operations acquired from TXI. These operations were not in close proximity to aggregates and other core assets of the Company and, unlike other marketplace competitors, were not vertically integrated with ready mixed concrete production. The divestiture primarily included a cement plant, two distribution terminals, mobile equipment, intangible assets and inventory. The Company also completed the integration of the TXI operations in 2015, and completed three smaller acquisitions the same year, which included three aggregates operations and related assets.

In 2016, the Company acquired aggregates, ready mixed concrete and asphalt and paving operations in southern Colorado that provided more than 500 million tons of mineral reserves and expanded the Company's presence along the Front Range

of the Rocky Mountains, home to 85% of Colorado's population. The Company also acquired the remaining and controlling interest in a ready mixed concrete company that serves the I-35 corridor in central Texas between Dallas and Austin, which enhanced the Company's position and provided additional vertical integration benefits with the Company's cement product line.

In 2018, the Company completed the acquisition of Bluegrass Materials Company ("Bluegrass"), the then largest privately held, pure-play aggregates business in the United States. With a portfolio of 22 active sites acquired by the Company, the operations provided more than 2.2 billion tons, or approximately 125 years, of strategically-located, high-quality reserves, in Georgia, South Carolina, Tennessee, Maryland, Kentucky and Pennsylvania. These operations complemented the Company's existing southeastern footprint in its Mid-America and Southeast Groups and provided a new growth platform within Maryland and Kentucky.

Between 2001 and 2019, the Company disposed of a number of underperforming operations, including aggregates, ready mixed concrete, trucking, and asphalt and road paving operations of its Building Materials business and the refractories business of its Magnesia Specialties business. In some of its divestitures, the Company concurrently entered into supply agreements to provide aggregates at market rates to certain of these divested businesses. During 2015, the Company disposed of certain non-core asphalt operations in San Antonio, Texas and divested its California cement operations. Divestitures in 2018 also included those required as part of the governmental approval associated with the acquisition of Bluegrass, consisting of one site owned by Bluegrass and one site operated by the Company. The Company will continue to evaluate opportunities to divest underperforming or non-strategic assets, if appropriate, during 2020 consistent with its strategic plan and in an effort to redeploy capital for other opportunities.

Business Segment Information

The Company conducts its Building Materials business through three reportable segments, organized by geography: Mid-America Group, Southeast Group and West Group. The Mid-America and Southeast Groups provide aggregates products only. The West Group provides aggregates, cement and downstream products. Our top ten states accounted for 86% of the Building Materials business total revenues in 2019: Texas, Colorado, North Carolina, Georgia, Iowa, Florida, South Carolina, Indiana, Maryland and Nebraska. The Company also has the Magnesia Specialties segment, which includes its magnesia-based chemicals and dolomitic lime businesses. For more information on the organization and geographic area of the Company's business segments, see "Note A: Accounting Policies-Organization" and "Note P: Segments" of the "Notes to Financial Statements" of the Company's consolidated financial statements, which appear in Item 8, "Financial Statements and Supplementary Data," of this Annual Report on Form 10-K (this "Form 10-K").

Building Materials Business

This section describes the product lines of the Building Materials business undertaken by the Company within its Mid-America Group, Southeast Group, and West Group. The Company operates its aggregates product line of business in all of these geographic segments within its Building Materials business. In 2019, the aggregates product line represented 62% of the Company's consolidated total products and services revenues. The Company's cement, ready mixed concrete, and asphalt and paving operations are conducted within the Company's West Group, with its two cement plants in Texas, and the remaining ready mixed concrete and asphalt product lines in Texas, Colorado, Louisiana, Arkansas, and Wyoming. Paving services are offered exclusively in Colorado. The Company's cement product line is described below and in greater detail in the next section.

The Building Materials business serves customers in the construction marketplace. The business' profitability is sensitive to national, regional and local economic conditions and cyclical swings in construction spending, which are in turn affected by fluctuations in levels of public-sector infrastructure funding; interest rates; access to capital markets; and demographic, geographic, employment and population dynamics. The heavy-side construction business, inclusive of much of the Company's operations, is conducted outdoors. Therefore, erratic weather patterns, seasonal changes, and other weather-related conditions, including precipitation, flooding, hurricanes, snowstorms, extreme temperatures, and droughts, can significantly affect production schedules, shipments, costs, efficiencies and profitability. Generally, the financial results for the first and fourth quarters are subject to the impacts of winter weather, while the second and third quarters are subject to the impacts of heavy precipitation.

Aggregates are an engineered, granular material consisting of crushed stone, and sand and gravel, manufactured to specific sizes, grades and chemistry for use primarily in construction applications. The Company's operations consist primarily of open pit quarries; however, the Company is the largest operator of underground aggregates mines in the United States with 14 active underground mines located in the Mid-America Group. The Company's aggregates reserves are 89 years on average at current production levels.

Cement is the basic binding agent used to bind water, aggregates and sand, in the production of ready mixed concrete. The Company has a strategic and leading cement position in Texas, with production facilities in Midlothian, Texas, south of Dallas/Fort Worth, and Hunter, Texas, north of San Antonio. These plants produce Portland and specialty cements, have a combined annual capacity of 4.5 million tons, and operated at 80% to 85% utilization in 2019. The Midlothian plant permit allows the Company to expand production by up to 800,000 additional tons. In addition to the two production facilities, the Company operates several cement distribution terminals. Calcium carbonate in the form of limestone is the principal raw material used in the production of cement. The Company owns more than 600 million tons of limestone reserves adjacent to its cement production plants.

Ready mixed concrete, a mixture primarily of cement, water, aggregates, and sand, is measured in cubic yards and specifically batched or produced for customers' construction projects and then transported and poured at the project site. The aggregates used for ready mixed concrete is a washed material with limited amounts of fines (such as dirt and clay). The Company operates 141 ready mix plants in Texas, Colorado, Louisiana, Arkansas, and Wyoming. Asphalt is most commonly used in surfacing roads and parking lots and consists of liquid asphalt, or bitumen, the binding medium, and aggregates. Similar to ready mixed concrete, each asphalt batch is produced to customer specifications. The Company's asphalt operations are located primarily in Colorado; additionally, paving services are offered in Colorado. Market dynamics for these downstream product lines include a highly competitive environment and lower barriers to entry compared with aggregates and cement.

The Building Materials business markets its products primarily to the construction industry, with 35% of the aggregates product line shipments in 2019 made to contractors in connection with highway and other public infrastructure projects and the balance of its shipments made primarily to contractors in connection with nonresidential and residential construction projects. The Company believes public-works projects have historically accounted for approximately 50% of the total annual aggregates and cement consumption in the United States. Therefore, these businesses benefit from public-works construction projects. The Company also believes exposure to fluctuations in nonresidential and residential, or private-sector, construction spending is lessened by the business' mix of public sector-related shipments.

As a result of dependence upon the construction industry, the profitability of aggregates and cement producers is sensitive to national, regional and local economic conditions, and particularly to cyclical swings in construction spending, which is affected by fluctuations in interest rates, demographic and population shifts, and changes in the level of infrastructure spending funded by the public sector.

While construction spending in the public and private market sectors is affected by economic cycles, the historic level of spending on public infrastructure projects has been, comparatively, more stable due to predictability of funding from federal, state and local governments, with approximately half of the funding from federal government and half from state and local governments in certain states. The *Fixing America's Surface Transportation Act*(the "FAST Act"), signed into law on December 4, 2015, is the first long-term transportation funding bill in nearly a decade and authorizes $305 billion over fiscal years 2016 through 2020. Included with FAST Act funding is $300 million available for loans issued under *Transportation Infrastructure Finance and Innovation Act*("TIFIA"). If a successor bill is not passed prior to the September 2020 expiration of the FAST Act, management expects continuing resolutions to be passed to continue federal highway funding at current levels. Public construction projects, once awarded, are seen through to completion. Thus, delays from weather or other factors typically serve to extend the duration of the construction cycle. State and local initiatives that support infrastructure funding, including gas tax increases and other ballot initiatives, are increasing in size and number as these governments recognize the need to play an expanded role in public infrastructure funding. In November 2019, 270 state and local ballot initiatives, 89% of all infrastructure funding measures up for vote, were approved and are estimated to generate over $9.6 billion in one-time and recurring revenues. Namely, Texas, Colorado, Georgia and North Carolina approved measures that will contribute a total of $8.1 billion to infrastructure funding, the majority of which are in Texas. Since 2010, 81% of transportation ballot initiatives have been approved by voters. Funding from the FAST Act, coupled with state and local transportation initiatives has resulted in an acceleration in lettings (making contracts available for bidding) and contract awards in key states, including Texas, Colorado, North Carolina, Georgia and Florida. The pace of construction should accelerate and shipments to the public infrastructure market should return to historical levels as monies from both the federal government and state and local governments become awarded.

Public-sector construction related to transportation infrastructure can be aggregates intensive and is funded through a combination of federal, state and local sources. The federal highway bill, currently the FAST Act, provides annual funding for public-sector highway construction projects and includes spending authorizations, which represent the maximum financial obligation that will result from the immediate or future outlays of federal funds for highway and transit programs. The federal government's surface transportation programs are financed mostly through the receipts of highway user taxes placed in the Highway Trust Fund, which is divided into the Highway Account and the Mass Transit Account. Revenues credited to the Highway Trust Fund are primarily derived from a federal gas tax, a federal tax on certain other motor fuels and interest on the accounts' accumulated balances. Of the currently imposed federal gas tax of $0.184 per gallon, which has been static since 1993, $0.15 is allocated to the Highway Account of the Highway Trust Fund.

Since most states are required to balance their budgets, reductions in revenues generally require a reduction in states' expenditures. However, the impact of state revenue reductions on highway investment will vary depending on whether the monies come from dedicated revenue sources, such as highway user fees, or whether portions are funded with general funds.

States continue to play an expanding role in infrastructure investment. In addition to federal appropriations, each state funds its infrastructure investment from specifically allocated amounts collected from various user fees, typically gasoline taxes and vehicle fees. Over the past several years, states have taken on a significantly larger role in funding infrastructure investment, including initiating special-purpose taxes and raising gas taxes. Management believes that financing at the state level, such as bond issuances, toll roads and tax initiatives, will grow at a faster rate in the near term than federal funding. State infrastructure spending generally leads to increased growth opportunities for the Company. The level of state public-works spending is varied across the nation and dependent upon individual state economies. The degree to which the Company could be affected by a reduction or slowdown in infrastructure spending varies by state. The state economies of the Building Materials business' ten largest revenue-generating states may disproportionately affect the Company's financial performance.

Governmental appropriations and expenditures are typically less interest rate-sensitive than private-sector spending. Obligations of federal funds is a leading indicator of highway construction activity in the United States. Before a state or local department of transportation can solicit bids on an eligible construction project, it enters into an agreement with the Federal Highway Administration to obligate the federal government to pay its portion of the project cost. Federal obligations are subject to annual funding appropriations by Congress.

The need for surface transportation improvements continues to significantly outpace the amount of available funding. A large number of roads, highways and bridges built following the establishment of the Interstate Highway System in 1956 are now in need of major repair or reconstruction. According to The Road Information Program ("TRIP"), a national transportation research group, vehicle travel on United States highways increased 17% from 2000 to 2017, while new lane road mileage increased only 5% over the same period. TRIP also reports that 44% of the nation's major roads are in poor or mediocre condition and 9% of the nation's bridges are structurally deficient. According to the 2015 American Association of State Highway and Transportation Officials' Transportation Bottom Line Report, annual investment in the nation's roads, highways and bridges needs to increase from $88 billion to $120 billion to improve conditions and meet the nation's mobility needs. While state DOTs and contractors are addressing their funding and labor constraints, the Company believes that with an enhanced infrastructure bill, those efforts would be more rapidly addressed. However, even in the absence of an enhanced infrastructure bill, strong customer confidence and improving sentiment leads management to believe that infrastructure activity for 2020 and beyond should benefit from the FAST Act and its eventual successor bill, the 2017 Tax Cuts and Jobs Act ("2017 Tax Act"), and additional state and local infrastructure initiatives.

Funding of public infrastructure, the Company's largest end-use market, is discussed in greater detail under "Management's Discussion and Analysis of Financial Condition and Results of Operations—Building Materials Business' Key Considerations—Public Infrastructure, the Company's largest end-use market, is funded through a combination of federal, state and local sources" in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations,'' of this Form 10-K.

The Company's Building Materials business covers a wide geographic area. The five largest sales-generating states (Texas, Colorado, North Carolina, Georgia, and Iowa) for the Building Materials business accounted for 72% of total revenues by state of destination in 2019. The Company's Building Materials business is accordingly affected by the economies in these regions and has been adversely affected in part by recessions and weaknesses in these economies from time to time. Recent improvements in the national economy and in some of the states in which the Company operates have led to improvements in profitability in the Company's Building Materials business.

Natural aggregates sources can be found in relatively homogeneous deposits in certain areas of the United States. As a general rule, truck shipments from an individual quarry are limited because the cost of transporting processed aggregates to customers is high in relation to the price of the product itself. As described below, the Company's distribution system mainly uses trucks, but also has access to a river barge and an ocean vessel network where the per-mile unit cost of transporting aggregates is much lower. In addition, acquisitions have enabled the Company to extend its customer base through increased access to rail transportation. Proximity of quarry facilities to customers or to long-haul transportation corridors is an important factor in competition for aggregates businesses.

Product shipments are moved by rail, water and truck through the Company's long-haul distribution network. The Company's rail network primarily serves its Texas, Florida, Colorado and Gulf Coast markets while the Company's Bahamas and Nova Scotia locations transport materials via oceangoing ships. The Company's strategic focus includes expanding inland and offshore capacity and acquiring distribution facilities and port locations to offload transported material. At December 31, 2019, the distribution network available to the Company consisted of 86 terminals. The long-haul distribution network can diversify market risk for locations that engage in long-haul transportation of their aggregates products. Particularly where a producing quarry serves a local market and transports products via rail, water and/or truck to be sold in other markets, the risk of a downturn in one market may be somewhat mitigated by other markets served by the location.

The Company generally acquires contiguous property around existing quarry locations. This property can serve as buffer property or additional mineral reserve capacity, assuming the underlying geology supports economical aggregates mining. In either instance, the acquisition of additional property around an existing quarry allows the expansion of the quarry footprint and extension of quarry life. Some locations having limited reserves may be unable to expand.

A long-term capital focus for the Company, primarily in the midwestern United States due to the nature of its indigenous aggregates supply, is underground limestone aggregates mines. The Company operates 14 active underground mines, located in the Mid-America Group, and is the largest operator of underground limestone aggregate mines in the United States. Production costs are generally higher at underground mines than surface quarries since the depth of the aggregate deposits and the access to the reserves result in higher costs related to development, explosives and depreciation costs. However, these locations often possess transportation advantages that can lead to higher average selling prices than more distant surface quarries.

The Company's acquisitions and capital projects have expanded its ability to move material by rail. The Company has added additional capacity in a number of locations that can now accommodate larger unit train movements. These expansion projects have enhanced the Company's long-haul distribution network. The Company's process improvement efforts have also improved operational effectiveness through plant automation, mobile fleet modernization, right-sizing and other cost control improvements. Accordingly, the Company has enhanced its reach through its ability to provide cost-effective coverage of coastal markets on the east and gulf coasts, as well as geographic areas that can be accessed economically by the Company's expanded distribution system. This distribution network moves aggregates materials from domestic and offshore sources, via rail and water, to markets where aggregates supply is limited.

As the Company continues to move more aggregates by rail and water, associated internal freight costs are expected to reduce gross margin. This typically occurs where the Company transports aggregates from a production location to a distribution location by rail or water, and the customer pays a selling price that includes a freight component. Margins are negatively affected because the Company typically does not charge the customer a profit associated with the transportation component of the selling price of the materials. Moreover, the Company's expansion of its rail-based distribution network, coupled with the extensive use of rail service in the Southeast and West Groups, increases the Company's dependence on and exposure to railroad performance, including track congestion, crew availability, railcar availability, and locomotive availability, and the ability to renegotiate favorable railroad shipping contracts. The waterborne distribution network, primarily located within the Southeast Group, also increases the Company's exposure to certain risks, including, among other items, meeting minimum tonnage requirements of shipping contracts, demurrage costs, fuel costs, ship availability and weather disruptions. The Company has long-term agreements with shipping companies to provide ships to transport the Company's aggregates to various coastal ports.

The Company's long-term shipping contracts for shipment by water are generally take-or-pay contracts with minimum and maximum shipping requirements. These contracts have varying expiration dates ranging from 2023 to 2027 and generally contain renewal options. However, there can be no assurance that these contracts can be renewed upon expiration or that terms will continue without significant increases. If the Company fails to ship the annual minimum tonnages under the agreement, it is still obligated to pay the shipping company the contractually-stated minimum amount for that year. In 2019, the Company did not incur these freight costs; however a charge is possible in 2020 if shipment volumes do not meet the contractually-stated minimums.

From time to time, the Company has experienced rail transportation shortages, particularly in the Southwest and Southeast. These shortages were caused by the downsizing in personnel and equipment by certain railroads during economic downturns. Historically, in response to these issues, rail transportation providers focused on increasing the number of cars per unit train under transportation contracts and generally required customers, through the freight rate structure, to accommodate larger unit train movements. A unit train is a freight train moving large tonnages of a single bulk product between two points without intermediate yarding and switching. Certain of the Company's sales yards have the system capabilities to meet the unit train requirements. Over the last few years, the Company has made capital improvements to a number of its sales yards in order to better accommodate unit train unloadings. Rail availability is seasonal and can impact aggregates shipments depending on competing demands for rail service.

More recently, railroads have increasingly begun emphasizing Precision Scheduled Railroading ("PSR"), which is focused on minimizing railcar dwell time and utilizing general purpose trains by blending existing train services. The Company does not expect the railroads' use of PSR to materially impact its operations in 2020. However, if the railroads do not efficiently execute on this change, it could disrupt shipment volumes for the Company.

From time to time, we have also experienced rail and trucking shortages due to competition from other products. If there are material changes in the availability or cost of rail or trucking services, we may not be able to arrange alternative and timely means to ship our products at a reasonable cost, which could lead to interruptions or slowdowns in our businesses or increases in our costs.

The Company's management expects the multiple transportation modes that have been developed with various rail carriers and via deep-water ships should provide the Company with the flexibility to effectively serve customers in the Southwest and Southeast coastal markets.

The construction aggregates industry has been consolidating, and the Company has actively participated in the industry's consolidation. When acquired, new locations sometimes do not satisfy the Company's internal safety, maintenance, pit development, or other standards, and may require additional resources before benefits of the acquisitions are fully realized. Industry consolidation slowed several years ago as the number of suitable small- to mid-sized acquisition targets in high-growth markets declined. During that period of fewer acquisition opportunities, the Company focused on investing in internal expansion or efficiency projects in high-growth markets. The number of acquisition opportunities has increased in the last few years as the economy recovered from the protracted recession. Opportunities include public and larger private, family-owned businesses, as well as asset swaps and divestitures from companies executing their strategic plans, rationalizing non-core assets, and repairing financially-constrained balanced sheets. The Company's Board of Directors (the "Board of Directors") and management continue to review and monitor the Company's strategic long-term plans, which include assessing business combinations and arrangements with other companies engaged in similar businesses, increasing the Company's presence in its core businesses, investing in internal expansion projects in high-growth markets, and pursuing new opportunities related to the Company's existing markets.

The Company's West Group became more vertically integrated through various acquisitions, including the 2014 TXI acquisition, in which the Company acquired not only aggregates locations, but also complementary cement, ready mixed concrete, asphalt and paving construction operations. The Company reports vertically-integrated operations within the Building Materials business segment, and their results are affected by volatile factors, including fuel costs, operating efficiencies, and weather, to an even greater extent than the Company's aggregates operations. Liquid asphalt and cement serve as key raw materials in the production of hot mix asphalt and ready mixed concrete, respectively. Therefore, fluctuations in prices for these raw materials directly affect the Company's operating results. Prices for liquid asphalt were higher in 2019 than in 2018. Liquid asphalt prices may not always follow other energy products (e.g., oil or diesel fuel) because of complexities in the refining process, which converts a barrel of oil into other fuels and petrochemical products. We expect the Company's gross margin to continue to improve for the legacy TXI aggregates-related downstream operations, similar to the pattern experienced at the Colorado aggregates-related downstream operations.

While aggregates-led, the Company continues to review its operational portfolio to determine if there are opportunities to divest underperforming assets in an effort to redeploy capital for other opportunities. The Company also reviews other independent Building Materials operations to determine if they might present attractive acquisition opportunities in the best interest of the Company, either as part of their own independent operations or operations that might be vertically integrated with other operations owned by the Company.

Environmental and zoning regulations have made it increasingly difficult for the aggregates industry to expand existing quarries and to develop new quarry operations. Although it cannot be predicted what policies will be adopted in the future by federal, state, and local governmental bodies regarding these matters, the Company anticipates that future restrictions will likely make zoning and permitting more difficult, thereby potentially enhancing the value of the Company's existing mineral reserves.

Management believes the aggregates product line's raw materials, or aggregates reserves, are sufficient to permit production at present operational levels for the foreseeable future. The Company does not anticipate any material difficulty in obtaining the raw materials that it uses for current production in its aggregates product line. The Company's aggregates reserves are 89 years on average, based on current production levels. However, certain locations may be subject to more limited reserves and may not be able to expand. Moreover, as noted above, environmental and zoning regulations will likely make it harder for the Company to expand its existing quarries or develop new quarry operations. The Company generally sells its aggregates, ready mixed concrete and asphalt products upon receipt of orders or requests from customers. The Company generally maintains inventories of aggregates products in sufficient quantities to meet the requirements of customers.

Cement Product Line

The cement product line of the Building Materials business produces Portland and specialty cements. Cement is the basic binding agent for concrete, a primary construction material. The principal raw material used in the production of cement is calcium carbonate in the form of limestone. The Company owns more than 600 million tons of limestone reserves adjacent to its two cement production plants in Texas. Similar to aggregates, cement is used in infrastructure projects, nonresidential and residential construction, and the railroad, agricultural, utility and environmental industries. Consequently, the cement industry is cyclical and dependent on the strength of the construction sector.

The Company has a strategic cement position in Texas, with production facilities in Midlothian, Texas, south of Dallas/Fort Worth, and in Hunter, Texas, north of San Antonio. These plants have a combined annual capacity of 4.5 million tons, as well as a current permit that would allow the Company to expand production by up to 800,000 additional tons at the Midlothian plant. In addition to these production facilities, the Company also operates, directly or through third parties, several cement distribution terminals in Texas.

Cement consumption is dependent on the time of year and prevalent weather conditions. According to the Portland Cement Association, nearly two-thirds of U.S. cement consumption occurs in the six months between May and October. Approximately 75% of all cement shipments are sent to ready mix concrete operators. The rest are shipped to manufacturers of concrete-related products, contractors, materials dealers, and oil well/mining/drilling companies, as well as government entities.

Energy accounted for approximately 22% of the cement production cost profile in 2019. Therefore, profitability of the cement product line is affected by changes in energy prices and the available supply of these products. The Company currently has fixed-price supply contracts for coal but also consumes natural gas, alternative fuel and petroleum coke. Further, profitability of the cement product line is also subject to kiln maintenance, and this process typically requires a plant to be shut down for a period of time as repairs are made.

The limestone reserves used as a raw material for cement are located on property, owned by the Company, adjacent to each of the two cement plants. Management believes that its reserves of limestone are sufficient to permit production at the current operational levels for the foreseeable future.

The cement product line generally delivers its products upon receipt of orders or requests from customers. Inventory for products is generally maintained in sufficient quantities to meet rapid delivery requirements of customers**.**

Magnesia Specialties Business

The Magnesia Specialties business produces and sells dolomitic lime from its Woodville, Ohio facility. The Magnesia Specialties business manufactures magnesia-based chemical products for industrial, agricultural and environmental applications at its Manistee, Michigan facility. These magnesia-based chemical products have varying uses, including flame retardants, wastewater treatment, pulp and paper production and other environmental applications. In 2019, 69% of Magnesia Specialties' total revenues were attributable to chemical products, 30% to lime, and 1% to stone sold as construction materials.

In 2019, 81% of the lime produced was sold to third-party customers, while the remaining 19% was used internally as a raw material in making the business' chemical products. Dolomitic lime products sold to external customers are used primarily by the steel industry. Products used in the steel industry, either directly as dolomitic lime or indirectly as a component of other industrial products, accounted for 35% of the Magnesia Specialties' total revenues in 2019, attributable primarily to the sale of dolomitic lime products. Accordingly, a portion of the revenues and profitability of the Magnesia Specialties business is affected by production and inventory trends in the steel industry. These trends are guided by the rate of consumer consumption, the flow of offshore imports, and other economic factors. The dolomitic lime business runs most profitably at 70% or greater steel capacity utilization; domestic capacity utilization averaged 80% in 2019, according to the American Iron and Steel Institute. Average steel production in 2019 increased 1.8% versus 2018.

In the Magnesia Specialties business, a significant portion of costs is of a fixed or semi-fixed nature. The production process requires the use of natural gas, coal and petroleum coke. Therefore, fluctuations in their pricing directly affect operating results. To help mitigate this risk, the Magnesia Specialties business has fixed-price agreements for approximately 62% of its 2020 coal, natural gas, and petroleum coke needs. For 2019, the Company's average cost per MCF (thousand cubic feet) for natural gas decreased 4.7% versus 2018.

Given high fixed costs, low capacity utilization can negatively affect the segment's results from operations. Management expects future organic profit growth to result from increased pricing, rationalization of the current product portfolio and/or further cost reductions. Management has shifted the strategic focus of the magnesia-based business to specialty chemicals that can be produced at volume levels that support efficient operations. Accordingly, that product line is not as dependent on the steel industry as the dolomitic lime product line.

The principal raw materials used in the Magnesia Specialties business are dolomitic limestone and magnesium-rich brine. Management believes that its reserves of dolomitic limestone and brine are sufficient to permit production at the current operational levels for the foreseeable future.

After the raw materials are combined to make magnesium hydroxide, the Magnesia Specialties business must dispose of the processed brine. In 2010, Occidental Chemical Corporation ("Occidental") acquired interests in, and became the counterparty to, a long-term processed brine supply agreement previously entered into by Magnesia Specialties, pursuant to which Occidental purchases processed brine from Magnesia Specialties, at market rates, for use in Occidental's production of calcium chloride products. Occidental also succeeded as Magnesia Specialties' partner in a joint venture to own and operate a processed brine supply pipeline between the Magnesia Specialties facility in Manistee, Michigan, and Occidental's facility in Ludington, Michigan.

Magnesia Specialties generally delivers its products upon receipt of orders or requests from customers. Inventory for products is generally maintained in sufficient quantities to meet rapid delivery requirements of customers. A significant portion of the 275,000 ton dolomitic lime capacity from a lime kiln at Woodville, Ohio is committed under a long-term supply contract.

The Magnesia Specialties business is highly dependent on rail transportation, particularly for movement of dolomitic lime from Woodville to Manistee and direct customer shipments of dolomitic lime and magnesia chemicals products from both Woodville and Manistee. The segment can be affected by the specific transportation and other risks and uncertainties outlined under Item IA, "Risk Factors," of this Form 10-K.

Patents and Trademarks

As of February 7, 2020, the Company owns, has the right to use, or has pending applications for approximately 23 patents pending or granted by the United States and various countries and approximately 94 trademarks related to business. The Company believes that its rights under its existing patents, patent applications and trademarks are of value to its operations, but no one patent or trademark or group of patents or trademarks is material to the conduct of the Company's business as a whole.

Customers

No material part of the business of any segment of the Company is dependent upon a single customer or upon a few customers, the loss of any one of which would have a material adverse effect on the segment. The Company's products are sold principally to commercial customers in private industry. Although large amounts of construction materials are used in public works projects, relatively insignificant sales are made directly to federal, state, county, or municipal governments, or agencies thereof.

Competition

Because of the impact of transportation costs on the aggregates industry, competition in the aggregates product line tends to be limited to producers in proximity to each of the Company's facilities. Although all of the Company's locations experience competition, the Company believes that it is generally a leading producer in 90% of the areas it serves. Competition is based primarily on quarry or distribution location and price, but quality of aggregates and level of customer service are also factors.

There are over 5,000 companies in the United States that produce construction aggregates. These include active crushed stone companies and active sand and gravel companies. The largest ten producers account for approximately 45-47% of the total market. The Company's ready mixed concrete and asphalt and paving operations are also in markets with numerous operators. A national trade association estimates there are about 5,500 ready mixed concrete plants in the United States owned by over 2,200 companies, with approximately 55,000 mixer trucks delivering ready mixed concrete. Similarly, a national trade association estimates there are approximately 4,000 asphalt plants in the United States owned by over 800 companies. The Company, with its Building Materials business, including its ready mixed concrete and asphalt and paving operations, competes with a number of other large and small producers. The Company believes that its ability to transport materials by ocean vessels and rail have enhanced the Company's ability to compete in the building materials industry.

The largest U.S. aggregates producers, including global companies, other than the Company, include:

Cemex S.A.B. de C.V.
CRH PLC
Heidelberger Druckmaschinen AG/Heidelberg USA
LafargeHolcim Ltd.
Luck Stone Company
MDU Resources Group, Inc.
Summit Materials, Inc.
Rogers Group Inc.
Vulcan Materials Company

The Company's Magnesia Specialties business competes with various companies in different geographic and product areas principally on the basis of quality, price, technological advances, and technical support for its products. While the revenues of the Magnesia Specialties business in 2019 were predominantly from North America, a portion was derived from customers located outside the United States.

According to the Portland Cement Association, United States cement production is widely dispersed with the operation of 98 cement plants in 34 states. Cement companies in the United States have annual sales valued at approximately $10.7 billion. The top five companies collectively operate 62.5% of U.S. clinker capacity with the largest company representing 18.8% of all domestic clinker capacity. An estimated 86% of U.S. clinker capacity is owned by companies headquartered outside of the United States. In reporting these figures for cement plants, capacity is often stated in terms of “clinker” capacity. “Clinker” is the initial product of cement production. Cement producers mine materials such as limestone, shale, or other materials, crush and screen the materials, and place them in a cement kiln. After being heated to extremely high temperatures, these materials form marble-sized balls or pellets called “clinker” that are then very finely ground to produce Portland cement.

The Company's strategic cement product line competes with various companies in different geographic and product areas principally on the basis of proximity, quality and price for its products, but level of customer service is also a factor. The cement product line also competes with imported cement because of the higher value of the product and the existence of major ports or terminals in Texas. Certain of the Company's competitors in the cement product line have greater financial resources than the Company.

The nature of the Company's competition varies among its product lines due to the widely differing amounts of capital necessary to build production facilities. Crushed stone production from quarries or mines, or sand and gravel production by dredging, is moderately capital intensive. The Company's major competitors in the aggregates markets are often large, vertically-integrated companies, with international operations. Ready mixed concrete production requires relatively small amounts of capital to build a concrete batching plant and acquire delivery trucks. Accordingly, economics can lead to lower barriers to entry in some markets. As a result, depending on the local market, the Company may face competition from small producers as well as large, vertically-integrated companies with facilities in many markets. Construction of cement production facilities is highly capital intensive and requires long lead times to complete engineering design, obtain regulatory permits, acquire equipment and construct a plant. Most domestic producers of cement are owned by large foreign companies operating in multiple international markets. Many of these producers maintain the capability to import cement from foreign production facilities.

Environmental and Governmental Regulations

The Company's operations are subject to and affected by federal, state, and local laws and regulations relating to zoning, land use, air emissions (including CO_2 and other greenhouse gases) and water discharges, waste management, noise and dust exposure control, reclamation and environmental, health and safety, regulatory matters. Certain of the Company's operations may from time to time involve the use of substances that are classified as toxic or hazardous within the meaning of these laws and regulations. Environmental operating permits are, or may be, required for certain of the Company's operations, and such permits are subject to modification, renewal and revocation.

The Company regularly monitors and reviews its operations, procedures, and policies for compliance with existing laws and regulations, changes in interpretations of existing laws and enforcement policies, new laws that are adopted, and new laws that the Company anticipates will be adopted that could affect its operations. The Company has a full-time team of environmental engineers and managers that perform these responsibilities. The direct costs of ongoing environmental compliance were approximately $26.0 million in 2019 and $25.3 million in 2018 and are related to the Company's environmental staff, ongoing monitoring costs for various matters (including those matters disclosed in this Form 10-K), and asset retirement costs. Capitalized costs related to environmental control facilities were approximately $11 million in 2019 and are expected to be approximately $15 million in 2020 and 2021. The Company's capital expenditures for environmental matters were not material to its results of operations or financial condition in 2019 and 2018. However, the Company's expenditures for environmental matters generally have increased over time and are likely to increase in the future. Despite the Company's compliance efforts, risk of environmental liability is inherent in the operation of the Company's businesses, and environmental liabilities could have a material adverse effect on the Company in the future.

Many of the applicable requirements of environmental laws are satisfied by procedures that the Company adopts as best business practices in the ordinary course of its operations. For example, plant equipment that is used to crush aggregates products may, in the ordinary course of operations, have an attached water spray bar that is used to clean the stone. The water spray bar also serves as a dust control mechanism that complies with applicable environmental laws. Moreover, the Company does not break out the portion of the cost, depreciation, and other financial information relating to the water spray bar that is attributable only to environmental purposes, as such an allocation would be arbitrary. The incremental portion of such operating costs that is attributable to environmental compliance rather than best operating practices is impractical to quantify. Accordingly, the Company expenses costs in that category when incurred as operating expenses.

The environmental accruals recorded by the Company are based on internal studies of the required remediation costs and estimates of potential costs that arise from time to time under federal, state and/or local environmental protection laws. Many of these laws and the regulations promulgated under them are complex, and are subject to challenges and new interpretations by regulators and the courts from time to time. In addition, new laws are adopted from time to time. It is often difficult to accurately and fully quantify the costs to comply with new rules until it is determined to which type of operations they will apply and the manner in which they will be implemented is more accurately defined. This process often takes years to finalize, and the rules often change significantly from the time they are proposed to the time they are final. The Company typically has several appropriate alternatives available to satisfy compliance requirements, which could range from nominal costs to some alternatives that may be satisfied in conjunction with equipment replacement or expansion that also benefits operating efficiencies or capacities and carry significantly higher costs.

Management believes that its current accrual for environmental costs is reasonable, although those amounts may increase or decrease depending on the impact of applicable rules as they are finalized or amended from time to time and changes in facts and circumstances. At this time, the Company believes that any additional costs for ongoing environmental compliance would not have a material adverse effect on the Company's obligations or financial condition.

The Company is generally required by state or local laws or pursuant to the terms of an applicable lease to reclaim quarry sites after use. Future reclamation costs are estimated using statutory reclamation requirements and management's experience and knowledge in the industry, and are discounted to their present value using a credit-adjusted, risk-free rate of interest. The future reclamation costs are not offset by potential recoveries. For additional information regarding compliance with legal requirements, see "Note O: Commitments and Contingencies" of the "Notes to Financial Statements" of the Company's consolidated financial statements included in Item 8, "Financial Statements and Supplemental Data," of this Form 10-K. The Company performs activities on an ongoing basis, as an integral part of the normal quarrying process, that may reduce the ultimate reclamation obligations. For example, the perimeter and interior walls of an open pit quarry are sloped and benched as they are developed to prevent erosion and provide stabilization. This sloping and benching meets dual objectives -- safety regulations required by the Mine Safety and Health Administration ("MSHA") for ongoing operations as

well as final reclamation requirements. Therefore, these types of activities are included in normal operating costs and are not a part of the asset retirement obligation. Historically, the Company has not incurred substantial reclamation costs in connection with the closing of quarries. Reclaimed quarry sites owned by the Company are from time to time available for sale, typically for commercial development or use as reservoirs.

The Company believes that its operations and facilities, both owned or leased, are in substantial compliance with applicable laws and regulations and that any noncompliance is not likely to have a material adverse effect on the Company's operations or financial condition. See "Legal Proceedings" under Item 3 of this Form 10-K, "Note O: Commitments and Contingencies" of the "Notes to Financial Statements" of the Company's consolidated financial statements included under Item 8, "Financial Statements and Supplemental Data," of this Form 10-K, and the "Environmental Regulation and Litigation" section included under Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," of this Form 10-K. However, future events, such as changes in or modified interpretations of existing laws and regulations or enforcement policies, or further investigation or evaluation of the potential health hazards of certain products or business activities, may give rise to additional compliance and other costs that could have a material adverse effect on the Company.

In general, mining and production facilities for aggregates, cement, ready mixed concrete, and asphalt must comply with air quality, water quality, and other environmental regulations, zoning and special use permitting requirements, applicable mining regulations, and federal health and safety requirements. As new quarry and mining sites and production facilities are located and acquired, the Company works closely with local authorities during the zoning and permitting processes to design new quarries, mines and production facilities in such a way as to minimize disturbances. The Company frequently acquires large tracts of land so that quarry, mine, and production facilities can be situated substantial distances from surrounding property owners. Also, in certain markets the Company's ability to transport material by rail and water allows it to locate its facilities further away from residential areas. The Company has established policies designed to minimize disturbances to surrounding property owners from its operations.

As is the case with other companies in the same industry, some of the Company's products contain varying amounts of crystalline silica, a common mineral also known as quartz. Excessive, prolonged inhalation of very small-sized particles of crystalline silica has been associated with lung diseases, including silicosis, and several scientific organizations and some states, such as California, have reported that crystalline silica can cause lung cancer. MSHA and the Occupational Safety and Health Administration ("OSHA") have established occupational thresholds for crystalline silica exposure as respirable dust. The Company monitors occupational exposures at its facilities and implements dust control procedures and/or makes available appropriate respiratory protective equipment to maintain the occupational exposures at or below the appropriate levels. The Company, through safety information sheets and other means, also communicates what it believes to be appropriate warnings and cautions its employees and customers about the risks associated with excessive, prolonged inhalation of mineral dust in general and crystalline silica in particular.

As is the case with others in the cement industry, the Company's cement operations produce varying quantities of cement kiln dust ("CKD"). This production by-product consists of fine-grained, solid, highly alkaline material removed from cement kiln exhaust gas by air pollution control devices. Since much of the CKD is actually unreacted raw materials, it is generally permissible to recycle the CKD back into the production process, and large amounts often are treated in such manner. CKD that is not returned to the production process or sold as a product itself is disposed in landfills. CKD is currently exempted from federal hazardous waste regulations under Subtitle C of the Resource Conservation and Recovery Act.

Amid concerns that greenhouse gas ("GHG") emissions are contributing to climate change, a number of governmental bodies, including the U.S. Congress and various U.S. states, have proposed, enacted or are contemplating legislative and regulatory changes to mitigate or address the potential impacts of climate change, including provisions for emissions reporting or reductions, the use of alternative fuels, carbon credits (such as a "cap and trade" system) and a carbon tax. For example, in the U.S., the United States Environmental Protection Agency ("USEPA") promulgated a rule mandating that sources considered to be large emitters of GHGs report those emissions. The manufacturing operations of the Company's Magnesia Specialties business release carbon dioxide, methane and nitrous oxides during the production of lime, magnesium oxide and hydroxide products. The Company's two magnesia-based chemicals facilities, as well as its two cement plants in Texas, file annual reports of their GHG emissions in accordance with the USEPA reporting rule. The primary operations of the Company, however, including its aggregates, ready mixed concrete and asphalt and paving product lines, are not major sources of GHG emissions. In fact, most of the GHG emissions from aggregates plant operations are tailpipe emissions from mobile sources, such as heavy construction and earth-moving equipment.

In 2010, the USEPA also issued a GHG emissions permitting rule, referred to as the "Tailoring Rule," which may require some industrial facilities to obtain permits for GHG emissions under the U.S. Clean Air Act's Prevention of Significant Deterioration ("PSD") and Title V operating permit programs. The U.S. Supreme Court ruled in June 2014 that the USEPA exceeded its statutory authority in issuing the Tailoring Rule but upheld the Best Available Control Technology ("BACT") requirements for GHGs emitted by sources already subject to PSD or Title V permitting requirements for other pollutants. Both of our cement plants, as well as our Magnesia Specialties plants, hold Title V Permits, and each (other than the Manistee, Michigan facility) is also subject to PSD requirements. It is not known whether the USEPA will proceed with revisions of its rules in response to the Court's decision or what the USEPA would require as BACT. In fact, no technologies or methods of operation for reducing or capturing GHGs have been proven successful in large scale applications, other than improvements in fuel efficiency. Thus, if future modifications to our facilities require PSD review for other pollutants, GHG BACT requirements could be triggered and may require significant additional costs. It is not possible, however, to estimate the cost of any such future requirements at this time.

The Company believes that comprehensive federal climate change legislation is not a near-term priority item in a divided Congress and that the primary method that GHGs will be regulated is through the USEPA using its rule-making authority. Various states where the Company has operations are also considering climate change initiatives, and the Company may be subject to state regulations in addition to any federal laws and rules that are passed.

If and when Congress passes additional legislation on GHGs, the Woodville, Ohio and Manistee, Michigan Magnesia Specialties operations, as well as the Company's two cement plants in Texas, which release CO_2 in certain of their processes and use carbon-based fuels for power equipment, kilns and the Company's mobile fleet, will likely be subject to any new requirements. The Company anticipates that any increased operating costs or taxes relating to GHG emission limitations at the Woodville or cement operations facilities would be passed on to customers. The magnesium oxide products produced at the Manistee operation, however, compete against other products that, due to the form and/or structure of the source material, require less energy in the calcination process, resulting in the generation of fewer GHGs per ton of production. Therefore, the Manistee facility may be required to absorb additional costs due to the regulation of GHG emissions in order to remain competitive in pricing in that market. In light of the various regulatory uncertainties, the Company at this time cannot reasonably predict what the costs of any future compliance requirements may be, but does not believe it will have a material adverse effect on the financial condition or results of the operations of either the Magnesia Specialties or Building Materials businesses. The Company continues to monitor GHG regulations and legislation and its potential impact on our cement business, financial condition and product demand.

In addition to impacts from increased regulation, climate change may result in physical and financial impacts that could have adverse effects on the Company's operations or financial condition. Physical impacts may include disruptions in production and/or regional supply or product distribution networks due to major storm events, shifts in regional rainfall and temperature patterns and intensities, as well as flooding from sea level changes. In addition, production and shipment levels for the Building Materials business and cement product line correlate with general construction activity, which occurs outdoors and, as a result, is affected by erratic weather patterns, seasonal changes and other unusual or unexpected weather-related conditions, which can significantly affect that business. Excessive rainfall and other severe weather jeopardize production, shipments and profitability in all markets served by the Company. In addition, climate and inclement weather can reduce the useful life of an asset. In particular, the Company's operations in the southeastern and Gulf Coast regions of the United States and the Bahamas are at risk for hurricane activity, most notably in August, September and October. The last few years brought an unprecedented amount of precipitation to the United States and particularly to Texas and the southeastern United States, notably the Carolinas, Florida, and Georgia, where they impacted the Company's facilities. In 2019, more cold and wet weather than is typical adversely impacted our Rocky Mountain concrete, asphalt, and paving businesses.

Our businesses also are dependent on reliable sources of electricity and fuels. We could incur increased costs or disruptions in our operations if climate change regulation or severe weather impacts the price or availability of purchased electricity or fuels or other materials used in our operations. These and other climate-related risks also could impact our customers, such as a downturn in the construction sector, which could lead to reduced demand for our products. The Company may not be able to pass on to its customers all the costs relating to these risks.

Notwithstanding the foregoing risks and uncertainties relating to climate change, there may also be opportunities for the Company to increase its business or revenues. For example, warm and/or moderate temperatures in March and November allow the construction season to start earlier and end later, respectively, which could have meaningful positive impacts on the Company's first- and fourth-quarter results, respectively. In addition, the Company's magnesium hydroxide products are used to increase fuel efficiency in various industries, including both coal- and gas-fired electricity generation, which has a direct impact on reducing energy use and GHG emissions by more GHG-intense companies.

In an effort to mitigate the risks to the Company associated with GHG emissions while ensuring and improving financial sustainability, the Company has adopted a corporate-wide management strategy that has resulted in multiple operating initiatives to implement or evaluate GHG reduction processes and technologies that also improve operational efficiencies, including: using alternative fuels such as biodiesel; reducing overall fuel use by converting from quarry trucks to conveyor belt systems, right-sizing quarry trucks to marry the appropriately sized truck with the size of production to reduce the number of required trips, and by replacing older rail cars with more efficient, high-capacity models that reduce the number of required trips; adding rail capacity in lieu of truck movements; and installing emissions monitoring equipment and real-time fleet management software. For example, in 2015, the Company's Midlothian cement plant was recognized by the USEPA as a high performing, energy efficient facility following investments in innovative air pollution control technologies and usage of alternative fuels.

Employees

As of January 31, 2020, the Company has approximately 8,846 employees, of which 6,703 are hourly employees and 2,143 are salaried employees. Included among these employees are 900 hourly employees represented by labor unions (10.2% of the Company's employees). Of such amount, 9.8% of our Building Materials business' hourly employees are members of a labor union and 100% of the Magnesia Specialties segment's hourly employees are represented by labor unions. The Company's principal union contracts for the Magnesia Specialties business cover employees at the Manistee, Michigan, magnesia-based chemicals plant and the Woodville, Ohio, lime plant. The Woodville collective bargaining agreement expires in June 2022. The Manistee collective bargaining agreement was renewed in 2019 and extended until August 2023. The Company believes it has good relations with all of its employees, including its unionized employees. While the Company's management does not expect significant difficulties in renewing these labor contracts, there can be no assurance that a successor agreement will be reached at any of these locations.

Available Information

The Company maintains an Internet address at www.martinmarietta.com. The Company makes available free of charge through its Internet website its Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports, if any, filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended ("Exchange Act"). These reports and any amendments are accessed via the Company's web site through a link with the Electronic Data Gathering, Analysis, and Retrieval ("EDGAR") system maintained by the Securities and Exchange Commission (the "SEC") at www.sec.gov. Accordingly, the Company's referenced reports and any amendments are made available as soon as reasonably practicable after the Company electronically files such material with, or furnishes it to, the SEC, once EDGAR places such material in its database.

The Company has adopted a *Code of Ethical Business Conduct* that applies to all of its directors, officers, and employees. The Company's code of ethics is available on the Company's web site at www.martinmarietta.com. The Company will disclose on its Internet web site any waivers of or amendments to its code of ethics as it applies to its directors and executive officers.

The Company has adopted a set of *Corporate Governance Guidelines* to address issues of fundamental importance relating to the corporate governance of the Company, including director qualifications and responsibilities, responsibilities of key board committees, director compensation, and similar issues. Each of the Audit Committee, the Management Development and Compensation Committee, and the Nominating and Corporate Governance Committee of the Board of Directors has adopted a written charter addressing various issues of importance relating to each committee, including the committee's purposes and responsibilities, an annual performance evaluation of each committee, and similar issues. These *Corporate Governance Guidelines*, and the charters of each of these committees, are available on the Company's web site at www.martinmarietta.com.

The Company's Chief Executive Officer and Chief Financial Officer are required to file with the SEC each quarter and each year certifications regarding the quality of the Company's public disclosure of its financial condition. The annual certifications are included as exhibits to this Form 10-K. The Company's Chief Executive Officer is also required to certify to the New York Stock Exchange each year that he is not aware of any violation by the Company of the New York Stock Exchange corporate governance listing standards.

ITEM 1A – RISK FACTORS

An investment in our common stock or debt securities involves risks and uncertainties. You should consider the following factors carefully, in addition to the other information contained in this Form 10-K, before deciding to purchase or otherwise trade our securities.

This Form 10-K and other written reports and oral statements made from time to time by the Company contain statements that, to the extent they are not recitations of historical fact, constitute forward-looking statements within the meaning of federal securities law. Investors are cautioned that all forward-looking statements involve risks and uncertainties, and are based on assumptions that the Company believes in good faith are reasonable, but which may be materially different from actual results. Investors can identify these statements by the fact that they do not relate only to historic or current facts. The words "may," "will," "could," "should," "anticipate," "believe," "estimate," "expect," "forecast," "intend," "outlook," "plan," "project," "scheduled," and similar expressions in connection with future events or future operating or financial performance are intended to identify forward-looking statements. Any or all of the Company's forward-looking statements in this Form 10-K and in other publications may turn out to be wrong.

Statements and assumptions on future revenues, income and cash flows, performance, economic trends, the outcome of litigation, regulatory compliance, and environmental remediation cost estimates are examples of forward-looking statements. Numerous factors, including potentially the risk factors described in this section, could affect our forward-looking statements and actual performance.

Investors are also cautioned that it is not possible to predict or identify all such factors. Consequently, the reader should not consider any such list to be a complete statement of all potential risks or uncertainties. Other factors besides those listed may also adversely affect the Company and may be material to the Company. The Company has listed the known material risks it considers relevant in evaluating the Company and its operations. The forward-looking statements in this document are intended to be subject to the safe harbor protection provided by Section 27A of the Securities Act of 1933 and Section 21E of the Exchange Act. These forward-looking statements are made as of the date hereof based on management's current expectations, and the Company does not undertake an obligation to update such statements, whether as a result of new information, future events, or otherwise.

For a discussion identifying some important factors that could cause actual results to vary materially from those anticipated in the forward-looking statements, see the factors listed below, along with the discussion of "Competition" under Item 1 of this Form 10-K, "Management's Discussion and Analysis of Financial Condition and Results of Operations" under Item 7 of this Form 10-K, and "Note A: Accounting Policies" and "Note O: Commitments and Contingencies" of the "Notes to Financial Statements" of the Company's consolidated financial statements included under Item 8, "Financial Statements and Supplemental Data," of this Form 10-K.

General Risk Factors

Our business is cyclical and depends on activity within the construction industry.

Economic and political uncertainty can impede growth in the markets in which we operate. Demand for our products, particularly in the private nonresidential and residential construction markets, could decline if companies and consumers are unable to obtain credit for construction projects or if an economic slowdown causes delays or cancellations of capital projects. State and federal budget issues may also hurt the funding available for infrastructure spending. The lack of available credit may limit the ability of states to issue bonds to finance construction projects. As a result of these issues, several of our top sales generating states, from time-to-time, stop bidding or slow bid projects in their transportation departments.

We sell most of our aggregates products, our primary business, and our cement products, to the construction industry, so our results depend on that industry's strength. Since our businesses depend on construction spending, which can be cyclical, our profits are sensitive to national, regional, and local economic conditions and the intensity of the underlying spending on aggregates and cement products. Construction spending is affected by economic conditions, changes in interest rates, demographic and population shifts, and changes in construction spending by federal, state, and local governments. If economic conditions change, a recession in the construction industry may occur and affect the demand for our products. The Great Recession of the late 2000s and early 2010s (the "Great Recession") was an example, and our shipment volumes were significantly reduced. Construction spending can also be disrupted by terrorist activity and armed conflicts.

While our business operations cover a wide geographic area, our earnings depend on the strength of the local economies in which we operate because of the high cost to transport our products relative to their price. If economic conditions and

construction spending decline significantly in one or more areas, particularly in our top five sales-generating states of our Building Materials business of Texas, Colorado, North Carolina, Georgia, and Iowa our profitability will decrease. We experienced this situation with the Great Recession.

The Great Recession resulted in large declines in shipments of aggregates products in our industry. Recent years, however, have shown a slow but steady turnaround in this trend. The current economic expansion in the United States, which began in 2009, has now become the longest economic recovery in United States history.

While historical spending on public infrastructure projects has been, comparatively, more stable as governmental appropriations and expenditures are typically less interest rate-sensitive than private sector spending, we experienced a slight retraction in aggregates product line shipments to the infrastructure market after uncertainty regarding the passage of the federal highway bill in 2014. Contractors were not able to get any certainty on the availability of federal infrastructure funding until late 2015 with the enactment of a new federal highway bill.

Our Building Materials business is seasonal and subject to the weather, which can significantly impact operations .

Since the heavy-side construction business is conducted outdoors, erratic weather patterns, seasonal changes and other weather-related conditions affect our business. Adverse weather conditions, including hurricanes and tropical storms, cold weather, snow, and heavy or sustained rainfall, reduce construction activity, restrict the demand for our products, and impede our ability to efficiently transport material. Adverse weather conditions also increase our costs and reduce our production output as a result of power loss, needed plant and equipment repairs, time required to remove water from flooded operations, and similar events. Severe drought conditions can restrict available water supplies and restrict production. The Building Materials product lines' production and shipment levels follow activity in the construction industry, which typically are strongest in the spring, summer and fall. Because of the weather's effect on the construction industry's activity, the production and shipment levels for the Company's Building Materials business, including all of its aggregates-related downstream operations, vary by quarter. The second and third quarters are generally subject to heavy precipitation, and thus are more profitable if precipitation is lighter, while the first and fourth quarters are subject to the impacts of winter weather, and thus are generally the least profitable. Weather-related hindrances were exacerbated over the last few years by record precipitation in many of our key markets, notably the eastern seaboard and Texas. Importantly, inclement weather was most significant during the second and third quarters, which represents the height of the construction season. These weather events reduced the Company's overall profitability in the last few years, so our results for those years, or in comparison to other years, may not be indicative of our future operating results. The Company's operations in the southeastern and Gulf Coast regions of the United States and the Bahamas are at risk for hurricane activity, most notably in August, September and October. In 2019, Hurricane Dorian and Tropical Storm Imelda temporarily disrupted the Company's business.

Competition and Growth Risk Factors

Our Building Materials business depends on the availability of aggregate reserves or deposits and our ability to mine them economically.

Our challenge is to find aggregates deposits that we can mine economically, with appropriate permits, near either growing markets or long-haul transportation corridors that economically serve growing markets. As communities have grown, they have taken up attractive quarrying locations and have imposed restrictions on mining. We try to meet this challenge by identifying and permitting sites prior to economic expansion, buying more land around our existing quarries to increase our mineral reserves, developing underground mines, and developing a distribution network that transports aggregates products by various methods, including rail and water. While our distribution network allows us to transport our products longer distances than would normally be considered economical, we can give no assurances that we will be successful.

Our businesses face many competitors.

Our businesses have many competitors, some of whom are bigger and have more resources than we do. Some of our competitors operate on a worldwide basis. Our results are affected by the number of competitors in a market, the production capacity that a particular market can accommodate, the pricing practices of other competitors, and the entry of new competitors in a market. We also face competition for some of our products from alternative products. For example, our Magnesia Specialties business may compete with other chemical products that could be used instead of our magnesia-based

products. As other examples, our aggregates, ready mix concrete, and asphalt and paving product lines may compete with recycled asphalt and concrete products that could be used instead of new products and our cement product line may compete with international competitors who are importing products to the United States with lower production and regulatory costs.

Our future growth may depend in part on acquiring other businesses in our industry.

We expect to continue to grow, in part, by buying other businesses. We will continue to look for strategic businesses to acquire, like our acquisition of TXI in 2014 and our acquisition of Bluegrass in 2018. In the past, we have made acquisitions to strengthen our existing locations, expand our operations and enter new geographic markets. We will continue to pursue selective acquisitions, joint ventures or other business arrangements we believe will help our Company. However, the continued success of our acquisition program will depend on our ability to find and buy other attractive businesses at an appropriate price and our ability to integrate acquired businesses into our existing operations. We cannot assume there will continue to be attractive acquisition opportunities for sale at reasonable prices that we can successfully integrate into our operations.

We may decide to pay all or part of the purchase price of any future acquisition with shares of our common stock. We may also use our stock to make strategic investments in other companies to complement and expand our operations. If we use our common stock in this way, the ownership interests of our existing shareholders at that time will be diluted and the price of our stock could decline. We operate our businesses with the objective of maximizing long-term shareholder return.

Our integration of the acquisition of or business combination with other businesses may not be as successful as projected.

We have a successful history of business combinations and integration of these businesses into our heritage operations. Our largest business acquisition was TXI, which closed in July 2014. In 2015, we completed the integration of TXI's operations into our own operations ahead of schedule, which allowed us to achieve and exceed the synergies, cost savings, and operating efficiencies we had forecasted at the time of the acquisition. In 2018, we completed the integration of the operations of Bluegrass into our own operations in a manner that surpassed the publicly stated synergy estimates provided at the closing of the transaction. However, in connection with the integration of any other business that we acquire, there is a risk that we will not be able to achieve such integration in a successful manner or on the time schedule we have projected or in a way that will achieve the level of synergies, cost savings, or operating efficiencies we forecast from the acquisition.

Any other significant business acquisition or combination we might choose to do, similar to the acquisition of TXI or Bluegrass, would require that we devote significant management attention and resources to preparing for and then integrating our business practices and operations. Based on our history, we believe we would be successful in this integration process. Nevertheless, we may fail to realize some of the anticipated benefits of any potential acquisition or other business combination that we pursue in the future, if the integration process takes longer than expected or is more costly than expected. Potential difficulties we may encounter in the integration process include:

- the inability to successfully combine operations in a manner that permits us to achieve the cost savings and revenue synergies anticipated to result from the proposed acquisition or business combination, which would result in the anticipated benefits of the acquisition or business combination not being realized partly or wholly in the time frame currently anticipated or at all;
- lost sales and customers as a result of certain customers of either the Company or former customers of the acquired or combined company deciding not to do business with the Company;
- complexities associated with managing the combined operations;
- integrating personnel;
- creation of uniform standards, internal controls, procedures, policies and information systems;
- potential unknown liabilities and unforeseen increased expenses, delays or regulatory issues associated with integrating the remaining operations; and
- performance shortfalls at business units as a result of the diversion of management attention caused by completing the remaining integration of the operations.

Our acquisitions could harm our results of operations.

In pursuing our business strategy, we conduct discussions, evaluate opportunities and enter into acquisition agreements. Acquisitions involve significant challenges and risks, including risks that:

- we may not realize a satisfactory return on the investment we make;
- we may not be able to retain key personnel of the acquired business;
- we may experience difficulty in integrating new employees, business systems and technology;
- our due diligence process may not identify compliance issues or other liabilities that are in existence at the time of our acquisition;
- we may not be able to bring the acquired business up to our expected levels of safety standards as soon as anticipated;
- we may have difficulty entering into new geographic markets in which we are not experienced; or
- we may be unable to retain the customers and partners of acquired businesses following the acquisition.

Our cement product line and Magnesia Specialties business may become capacity-constrained.

If our cement product line or Magnesia Specialties business becomes capacity-constrained, they may be unable to timely satisfy the demand for some of their products, and any resulting changes in customers would introduce volatility to the earnings of these segments. We can address capacity needs by enhancing our manufacturing productivity, increasing the operational availability of equipment, reducing machinery down time and extending machinery useful life. Future demand for our products may require us to expand further our manufacturing capacity, particularly through the purchase of additional manufacturing equipment. However, we may not be able to increase our capacity in time to satisfy increases in demand that may occur from time to time. Capacity constraints may prevent us from satisfying customer orders and result in a loss of sales to competitors that are not capacity-constrained. In addition, we may suffer excess capacity if we increase our capacity to meet actual or anticipated demand and that demand decreases or does not materialize. While we are permitted to expand production by up to 800,000 additional tons at our Midlothian plant, it could take us a significant period of time before such production expansion could come to fruition.

Our cement product line could suffer if cement imports from other countries significantly increase or are sold in the U.S. in violation of U.S. fair trade laws.

The cement industry has in the past obtained antidumping orders imposing duties on imports of cement and clinker from other countries that violated U.S. fair trade laws. Currently, an antidumping order against cement and clinker from Japan is set to expire but is under review for extension by the Federal Trade Commission. As has always been the case, cement operators with import facilities can purchase cement from other countries, such as those in Latin America and Asia, which could compete with domestic producers. In addition, if environmental regulations increase the costs of domestic producers compared to foreign producers that are not subject to similar regulations, imported cement could achieve a significant cost advantage over domestically produced cement. An influx of cement or clinker products from countries not subject to antidumping orders, or sales of imported cement or clinker in violation of U.S. fair trade laws, could adversely affect our cement product line.

Economic, Political and Legal Risk Factors

Changes in legal requirements and governmental policies concerning zoning, land use, the environment, health and safety and other areas of the law, as well as litigation relating to these matters, affect our businesses. Our operations expose us to the risk of material environmental liabilities.

Many federal, state and local laws and regulations relating to zoning, land use, air emissions (including GHGs) and water discharges, waste management, noise and dust control, reclamation and other environmental, health and safety matters govern our operations. Some of our operations require permits, which may impose additional operating standards, and are subject to modification renewal and revocation. Despite our extensive efforts to remain in strict compliance at all times with all applicable laws and regulations, the risk of liabilities, particularly environmental liabilities, is inherent in the operation of our businesses. These potential liabilities could result in material costs, including for fines or personal injury or damages claims, which could have an adverse impact on our operations and profitability.

Future events, including changes in existing laws or regulations or enforcement policies, or further investigation or evaluation of the potential health hazards of some of our products or business activities may result in additional or unanticipated compliance and other costs. We could be required to invest in preventive or remedial action, like pollution control facilities, which could be substantial or which could result in restrictions on our operations or delays in obtaining required permits or other approvals.

Our operations are subject to manufacturing, operating, and handling risks associated with the products we produce and the products we use in our operations, including the related storage and transportation of raw materials, products, hazardous substances, and wastes. We are exposed to hazards including storage tank leaks, explosions, discharges or releases of hazardous substances, exposure to dust, and the operation of mobile equipment and manufacturing machinery.

These risks can subject us to potentially significant liabilities relating to personal injury or death, or property damage, and may result in civil or criminal penalties, which could hurt our productivity or profitability. For example, from time to time we investigate and remediate environmental contamination relating to our prior or current operations, as well as operations we have acquired from others, and in some cases we have been or could be named as a defendant in litigation brought by governmental agencies or private parties.

We are involved from time to time in litigation and claims arising from our operations. While we do not believe the outcome of pending or threatened litigation will have a material adverse effect on our operations or our financial condition, an unexpected and material adverse outcome in a pending or future legal action could potentially have a negative effect on our Company.

Climate change and related legislation or regulations may adversely impact our business, including potential physical and financial impacts.

Amid concerns that GHG emissions are contributing to climate change, a number of governmental bodies, including the U.S. Congress and various U.S. states, have proposed, enacted or are contemplating legislative and regulatory changes to mitigate or address the potential impacts of climate change, including provisions for emissions reductions or the use of alternative fuels, carbon credits (such as a "cap and trade" system) and a carbon tax. For example, in the U.S., the USEPA promulgated a mandatory reporting rule covering GHG emissions from sources considered to be large emitters. The USEPA has also promulgated a GHG emissions permitting rule, referred to as the “Tailoring Rule,” which may require some industrial facilities to obtain operating permits for GHG emissions under the U.S. Clean Air Act. Although the U.S. Supreme Court subsequently ruled in June 2014 that the USEPA exceeded its statutory authority in issuing the Tailoring Rule, the Court upheld the so-called “Best Available Control Technology” requirements for GHGs emitted by sources that already require Title V operating permits or are subject to PSD requirements for other pollutants. Thus, if future modifications to our Magnesia Specialties or cement facilities require PSD review for other pollutants, GHG permitting requirements may also be triggered, which could require us to incur significant additional costs.

Although the operations of the Company’s aggregates, ready mixed concrete and asphalt and paving product lines are not major sources of GHG emissions, any additional regulatory restrictions on emissions of GHGs imposed by the USEPA will likely impact the Company’s magnesia-based chemicals operations in Woodville, Ohio and Manistee, Michigan, as well as its two cement plants in Texas, each of which file annual reports of GHG emissions as required by the USEPA reporting rule. It is not possible, however, to estimate the cost of any such future requirements at this time. In addition, the Company may not be able to recover any increased operating costs or taxes relating to GHG emission limitations at those plants from its customers in order to remain competitive in pricing in the relevant markets.

In addition to impacts from increased GHG and other climate-related regulation, climate change may result in physical and financial impacts that could have adverse effects on the Company’s operations or financial condition. Given the nature of our operations, physical impacts may include disruptions in production and/or regional supply or product distribution networks due to major storm events, shifts in regional rainfall and temperature patterns and intensities, as well as flooding from sea level changes. In addition, production and shipment levels for the Building Materials business and cement operations correlate with general construction activity, most of which occurs outdoors and, as a result, is affected by erratic weather patterns, seasonal changes and other unusual or unexpected weather-related conditions, which can significantly affect that business. Excessive rainfall and other severe weather events also jeopardize production, shipments and profitability in all markets served by the Company. In particular, the Company’s operations in the Southeastern and Gulf Coast regions of the United States and the Bahamas are at risk for hurricane activity, most notably in August, September and October. The last few years brought an unprecedented amount of precipitation to the United States and particularly to Texas and the southeastern United States. In addition, climate and inclement weather can reduce the useful life of an asset.

Our businesses also are dependent on reliable sources of electricity and fuels. We could incur increased costs or disruptions in our operations if climate change legislation and regulation or severe weather impacts the price or availability of purchased electricity or fuels or other materials used in our operations. These and other climate-related risks also could impact our customers, such as a downturn in the construction sector, which could lead to reduced demand for our products. The Company may not be able to pass on to its customers all the costs related to mitigating these risks.

The overall impacts of climate change on our operations and the Company are highly uncertain and difficult to estimate. However, climate change legislation and regulation concerning GHGs could have a material adverse effect on our future financial position, results of operations or cash flows.

Our business is dependent on funding from a combination of federal, state and local sources.

Our products are used in public infrastructure projects, which include the construction, maintenance, and improvement of highways, streets, roads, bridges, schools, and similar projects. Accordingly, our business is dependent on the level of federal, state, and local spending on these projects. The visibility into future federal infrastructure funding was clarified and stabilized to some extent in 2015 with the passage of the current federal highway bill, the FAST Act, which reauthorized federal highway and transportation funding programs. The FAST Act, however, only reauthorized federal infrastructure funding through 2020, so must be reauthorized this year. If not reauthorized this year, the Company anticipates some level of funding would be continued with continuing resolutions. The uncertainty of federal funding has led to the increase in state and alternative methods of infrastructure funding. We expect to see increased infrastructure spending at the state level in 2020. At the federal level, we expect to see some increased infrastructure spending in 2020 resulting from the FAST Act funding, but will be dependent on a successor FAST Act bill or continuing resolutions in the future for any greater federal impact on funding. Any enhanced federal infrastructure bill will require Congressional approval. We cannot be assured, however, of such approval or of the existence, amount, and timing of appropriations for spending on future projects.

Federal highway bills provide spending authorizations that represent maximum amounts. Each year, an appropriation act is passed establishing the amount that can actually be used for particular programs. The annual funding level is generally tied to receipts of highway user taxes placed in the Highway Trust Fund. Once the annual appropriation is passed, funds are distributed to each state based on formulas (“apportionments”) or other procedures (“allocations"). Apportioned and allocated funds generally must be spent on specific programs as outlined in the federal legislation. The Highway Trust Fund has experienced shortfalls in recent years, due to high gas prices, fewer miles driven and improved automobile fuel efficiency. These shortfalls created a significant decline in federal highway funding levels. In response to the projected shortfalls, money has been transferred from the General Fund into the Highway Trust Fund over the past several years. Timely Congressional action is needed to address the funding mechanism for the Highway Trust Fund. We cannot be assured of the existence, timing or amount of federal highway funding levels in the future. We also cannot be assured of the impact of the recent sharp reduction in gasoline prices on the levels of highway user taxes that might be collected in the future and the corresponding levels of funding to the Highway Trust Fund.

At the state level, each state funds its infrastructure spending from specially allocated amounts collected from various taxes, typically gasoline taxes and vehicle fees, along with voter-approved bond programs. Shortages in state tax revenues can reduce the amounts spent on state infrastructure projects, even below amounts awarded under legislative bills. Delays in state infrastructure spending can hurt our business. Many states after the Great Recession experienced state-level funding pressures caused by lower tax revenues or other inability to finance approved projects. For example, North Carolina was among the states that experienced these pressures, and this state disproportionately affects our revenues and profits. Most state budgets, including North Carolina’s, improved in 2014 and later years as increased tax revenues helped resolve budget constraints. North Carolina infrastructure spending recently has been restrained by spending required elsewhere for storm relief and litigation settlements. Despite these restraints, the North Carolina General Assembly has provided interim financial relief for North Carolina to continue to fund its infrastructure spending.

During the past several years, many states have taken on a significantly larger role in funding infrastructure investment, including initiating special-purpose taxes and raising gas taxes. We anticipate further growth in state-level funding initiatives, such as bond issues, toll roads, and special purpose taxes, as states address infrastructure needs, particularly in periods of federal funding uncertainty. Nevertheless, it is a continuing risk to our business that sufficient funding from federal, state, and local sources will not be available to address infrastructure needs.

Our businesses could be impacted by rising interest rates.

As discussed previously, our operations are highly dependent upon the interest rate-sensitive construction and steelmaking industries. Therefore, business in these industries and for us may decline if interest rates rise and costs increase.

For example, demand in the residential construction market in which we sell our aggregate products is affected by interest rates. In 2019, the Federal Reserve lowered the federal funds rate to a range of 1.5% to 1.75%, cutting the rate three times during the year. At its December, 2019, meeting the Federal Reserve held the federal funds rate steady and signaled its desire to maintain the rate at that level during 2020. This course of action continued at its January, 2020, meeting when the Federal Reserve again held rates steady and changed little in its economic outlook as the United States economy continued to extend its longest expansion on record. There can be no assurance, however, that interest rates will not increase in the future, affecting our business in an adverse manner. The residential construction market accounted for 22% of our aggregates product line shipments in 2019.

Aside from these inherent risks from within our operations, our earnings are also affected by changes in short-term interest rates. However, rising interest rates are not necessarily predictive of weaker operating results.

Rising interest rates could also result in disruptions in the credit markets, which could affect our business, as described in greater detail under "*Disruptions in the credit markets could affect our business"* below.

Increases in our effective income tax rate may harm our results of operations.

A number of factors may increase our future effective income tax rate, including:

- governmental authorities increasing taxes or eliminating deductions, particularly the depletion deduction;
- the mix of earnings from depletable versus non-depletable businesses;
- the jurisdictions in which earnings are taxed;
- the resolution of issues arising from tax audits with various tax authorities;
- changes in the valuation of our deferred tax assets and liabilities;
- adjustments to estimated taxes upon finalization of various tax returns;
- changes in available tax credits;
- changes in stock-based compensation;
- other changes in tax laws; and
- the interpretation of tax laws and/or administrative practices.

Any significant increase in our future effective income tax rate could reduce net earnings and free cash flow for future periods.

Personnel Risks

Labor disputes could disrupt operations of our businesses.

Labor unions represent approximately 10% of the hourly employees of our Building Materials business and 100% of the hourly employees of our Magnesia Specialties business. Our collective bargaining agreements for employees of our Magnesia Specialties business at the Manistee, Michigan magnesia chemicals plant and the Woodville, Ohio, lime plant expire in August 2023 and June 2022, respectively.

Disputes with our trade unions, or the inability to renew our labor agreements, could lead to strikes or other actions that could disrupt our businesses, raise costs, and reduce revenues and earnings from the affected locations.

We depend on the recruitment and retention of qualified personnel, and our failure to attract and retain such personnel could affect our business.

Our success depends to a significant degree upon the continued services of our key personnel and executive officers. Our prospects depend upon our ability to attract and retain qualified personnel for our operations. Competition for personnel is intense, and we may not be successful in attracting or retaining qualified personnel, which could negatively affect our business.

Financial, Accounting and Cost Management Risk Factors

Our business is a capital-intensive business.

The property and machinery needed to produce our products are very expensive. Therefore, we require large amounts of cash to operate our businesses. We believe that our cash on hand, along with our projected operating cash flows and our available financing resources, is adequate to support our anticipated operating and capital needs. Our ability to generate sufficient cash flow depends on future performance, which will be subject to general economic conditions, industry cycles and financial, business, and other factors affecting our operations, many of which are beyond our control. If we are unable to generate sufficient cash to operate our business, we may be required, among other things, to further reduce or delay planned capital or operating expenditures.

Our earnings are affected by the application of accounting standards and our critical accounting policies, which involve subjective judgments and estimates by our management. Our estimates and assumptions could be wrong.

The accounting standards we use in preparing our financial statements are often complex and require that we make significant estimates and assumptions in interpreting and applying those standards. We make critical estimates and assumptions involving accounting matters including our goodwill impairment testing, our expenses and cash requirements for our pension plans, our estimated income taxes, and how we account for our property, plant and equipment, and inventory. These estimates and assumptions involve matters that are inherently uncertain and require our subjective and complex judgments. If we used different estimates and assumptions or used different ways to determine these estimates, our financial results could differ.

While we believe our estimates and assumptions are appropriate, we could be wrong. Accordingly, our financial results could be different, either higher or lower. We urge you to read the Critical Accounting Policies and Estimates section included under Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” of the Form 10-K.

The adoption of new accounting standards may affect our financial results.

The accounting standards we apply in preparing our financial statements are reviewed by regulatory bodies and are changed from time to time. New or revised accounting standards could, either positively or negatively, affect results reported for periods after adoption of the standards as compared to the prior periods, or require retrospective application changing results reported for prior periods. We urge you to read about our accounting policies in Note A of our Consolidated financial statements included under Item 8, “Financial Statements and Supplementary Data,” of this Form 10-K.

Reports from the Public Company Accounting Oversight Board’s (“PCAOB”) inspections of public accounting firms continue to outline findings and recommendations which could require these firms to perform additional work as part of their financial statement audits. The Company’s costs to respond to these additional requirements may increase.

Disruptions in the credit markets could affect our business.

We have considered the current economic environment and its potential impact to the Company’s business. Demand for aggregates products, particularly in the infrastructure construction market, had been negatively affected by federal and state budget and deficit issues and the uncertainty over future highway funding levels. Further, delays or cancellations to capital projects in the nonresidential and residential construction markets could occur if companies and consumers are unable to obtain financing for construction projects or if consumer confidence continues to be eroded by economic uncertainty.

A recessionary construction economy can also increase the likelihood we will not be able to collect on all of our accounts receivable with our customers. We are protected in part, however, by payment bonds posted by many of our customers or end-users. Nevertheless, we experienced a delay in payment from some of our customers during the construction downturn, which can negatively affect operating cash flows. Historically, our bad debt write-offs have not been significant to our operating results, and we believe our allowance for doubtful accounts is adequate.

The credit environment could impact the Company’s ability to borrow money in the future. Additional financing or refinancing might not be available and, if available, may not be at economically favorable terms. Further, an increase in leverage could lead to deterioration in our credit ratings. A reduction in our credit ratings, regardless of the cause, could also limit our ability to obtain additional financing and/or increase our cost of obtaining financing. There is no guarantee we will be able to access the capital markets at financially economical interest rates, which could negatively affect our business.

We may be required to obtain financing in order to fund certain strategic acquisitions, if they arise, or to refinance our outstanding debt. It is possible a large strategic acquisition would require that we issue both newly issued equity and debt securities in order to maintain our investment grade credit rating and could result in a ratings downgrade notwithstanding our issuance of equity securities to fund the transaction. We are also exposed to risks from tightening credit markets, through the interest payable on our outstanding variable-rate debt and the interest cost on future borrowings under our credit facilities. While management believes our credit ratings will remain at a composite investment-grade level, we cannot be assured these ratings will remain at those levels. While management believes the Company will continue to have credit available to it adequate to meet its needs, there can be no assurance of that.

Our Magnesia Specialties business faces currency risks from its overseas operations.

Our Magnesia Specialties business sells some of its products outside the United States. Therefore, the operations of the Magnesia Specialties business are affected from time to time by the fluctuating values of the currency exchange rates of the countries in which it does business in relation to the value of the U.S. Dollar. The business tries to mitigate the short-term effects of currency exchange rates by primarily denominating sales in the U.S. Dollar. This still leaves the business subject to certain risks, depending on the strength of the U.S. Dollar. In 2019, the strength of the U.S. Dollar in foreign markets negatively affected the overall price of the products of the Magnesia Specialties business when compared to foreign-domiciled competitors.

Unexpected equipment failures, catastrophic events and scheduled maintenance may lead to production curtailments or shutdowns.

Our manufacturing processes are dependent upon critical pieces of equipment, such as our kilns and finishing mills. This equipment, on occasion, may be out of service as a result of failures or damage during accidents. In addition to equipment failures, our facilities are also subject to the risk of catastrophic loss due to unanticipated events such as fires, explosions or violent weather conditions. We have one- to two-week scheduled outages at least once a year to refurbish our cement and dolomitic lime production facilities. In 2019, the cement product line incurred shutdown costs of $26.3 million during the year. In 2019, the Magnesia Specialties business incurred shutdown costs of $4.4 million during the year. Any significant interruption in production capability may require us to make significant capital expenditures to remedy problems or damage as well as cause us to lose revenue due to lost production time.

Our paving operations present additional risks to our business.

Our paving operations face challenges when our contracts have penalties for late completion. In some instances, including many of our fixed-price contracts, we guarantee project completion by a certain date. If we subsequently fail to complete the project as scheduled, we may be held responsible for costs resulting from the delay, generally in the form of contractually agreed-upon liquidated damages. Under these circumstances, the total project cost could exceed our original estimate, and we could experience a loss of profit or a loss on the project. In our paving operations, we also have fixed-price and fixed-unit-price contracts where our profits can be adversely affected by a number of factors beyond our control, which can cause our actual costs to materially exceed the costs estimated at the time of our original bid. These same issues and risks can also impact some of our contacts in our asphalt and ready mixed concrete operations. These risks are somewhat mitigated by the fact that a majority of our road paving contracts are for short duration projects.

Our ready mixed concrete and asphalt and paving product lines have lower profit margins and operating results can be more volatile.

Our ready mixed concrete and asphalt and paving businesses typically generate lower profit margins than our aggregates and cement product lines due to potentially volatile input costs, highly competitive market dynamics, and lower barriers to entry. Therefore, if we expand these operations, our consolidated gross margin would likely be adversely affected. Our overall ready mixed concrete and asphalt and paving operations' gross margin was 10.4% for 2019 and 10.3% for 2018. The overall gross margin of our Building Materials business will continue to be reduced by the lower gross margins for our ready mixed concrete and asphalt and paving product lines.

Suppliers, Raw Materials, and Energy Costs Risk Factors

Short supplies and high costs of fuel, energy and raw materials affect our businesses.

Our businesses require a continued supply of diesel fuel, natural gas, coal, petroleum coke and other energy. The financial results of these businesses have been affected by the short supply or high costs of these fuels and energy. Changes in energy costs also affect the prices that the Company pays for related supplies, including explosives, conveyor belting and tires. While we can contract for some fuels and sources of energy, such as fixed-price supply contracts for coal and petroleum coke, significant increases in costs or reduced availability of these items have and may in the future reduce our financial results. Moreover, fluctuations in the supply and costs of these fuels and energy can make planning for our businesses more difficult. Because of the fluctuating trends in diesel fuel prices, we may enter into fixed-price fuel agreements from time to time for a portion of our diesel fuel to reduce our diesel fuel price risk. Our last fixed-price commitment for a portion of our diesel fuel requirements expired at the end of 2016.

The average cost per gallon of diesel fuel was $2.08, $2.29, and $1.81 in 2019, 2018, and 2017, respectively. For 2019, the average cost per MCF (thousand cubic feet) for natural gas decreased 4.7% versus 2018, which had decreased approximately 4% from 2017 levels.

The Company's Magnesia Specialties business has fixed-price agreements for 62% of its 2020 coal, natural gas, and petroleum coke needs. The cement operations have fixed-price agreements for a portion of their 2020 coal and natural gas needs.

Cement production requires large amounts of energy, including electricity and fossil fuels. Energy costs represented approximately 22% of the 2019 direct production costs of our cement product line. Therefore, the cost of energy is one of our largest expenses. Prices for energy are subject to market forces largely beyond our control and can be quite volatile. Price increases that we are unable to pass through in the form of price increases for our products, or disruption of the uninterrupted supply of fuel and electricity, could adversely affect us. Accordingly, volatility in energy costs can adversely affect the financial results of our cement product line. Profitability of the cement product line is also subject to kiln maintenance, which requires the plant to be shut down for a period of time as repairs are made. The cement product line incurred shutdown costs of $26.3 million and $17.3 million during 2019 and 2018, respectively.

Similarly, our ready mixed concrete and asphalt and paving operations also require a continued supply of liquid asphalt and cement, which serve as key raw materials in the production of hot mix asphalt and ready mixed concrete, respectively. Some of these raw materials we produce internally, but most are purchased from third parties. These purchased raw materials are subject to potential supply constraints and significant price fluctuations, which are beyond our control. The financial results of our ready mixed concrete and asphalt and paving operations have been affected by the short supply or high costs of these raw materials. We generally see frequent volatility in the costs for these raw materials. Liquid asphalt prices were higher in 2019 than in 2018. Liquid asphalt prices may not always follow other energy products (e.g., oil or diesel fuel) because of complexities in the refining process, which converts a barrel of oil into other fuels and petrochemical products.

Cement is sensitive to supply and price volatility.

Cement competition is often based primarily on price, which is highly sensitive to changes in supply and demand. Prices may fluctuate significantly in response to relatively minor changes in supply and demand, general economic conditions and other market conditions, which we cannot control. When cement producers increase production capacity or more cement is imported into the market, an oversupply of cement in the market may occur if supply exceeds demand. In that case cement prices generally decline. We cannot be assured that prices for our cement products sold will not decline in the future or that such decline will not have a material adverse effect on our cement product line.

Our Magnesia Specialties business depends in part on the steel industry and the supply of reasonably priced fuels.

Our Magnesia Specialties business sells some of its products to companies in the steel industry. While we have reduced this risk over the last few years, this business is still dependent, in part, on the strength of the cyclical steel industry. The Magnesia Specialties business also requires significant amounts of natural gas, coal, and petroleum coke, and financial results are negatively affected by increases in fuel prices or shortages.

Cyber and Information Security Risk Factors

We are dependent on information technology and our systems and infrastructure face certain risks, including cybersecurity risks and data leakage risks.

We are dependent on information technology systems and infrastructure, including reliance on third-party vendors and third-party software. Any significant breakdown, invasion, destruction or interruption of these systems by employees, others with authorized access to our systems, or unauthorized persons could negatively impact operations. There is also a risk that we could experience a business interruption, theft of information or reputational damage as a result of a cyber-attack, such as an infiltration of a data center, or data leakage of confidential information either internally or at our third-party providers. While we have invested in the protection of our data and information technology to reduce these risks and routinely test the security of our information systems network, we cannot assure you that our efforts will prevent breakdowns or breaches in our systems that could adversely affect our business.

Other Risk Factors

Delays or interruptions in shipping products of our businesses could affect our operations.

Transportation logistics play an important role in allowing us to supply products to our customers, whether by truck, rail or water. We also rely heavily on third-party truck and rail transportation to ship coal, natural gas and other fuels to our plants. Any significant delays, disruptions, or the non-availability of our transportation support system could negatively affect our operations. Transportation operations are subject to capacity constraints, high fuel costs and various hazards, including extreme weather conditions and slowdowns due to labor strikes and other work stoppages. In Texas, we compete for third-party trucking services with operations in the oil and gas fields, which can significantly constrain the availability of those services to us. If there are material changes in the availability or cost of transportation services, we may not be able to arrange alternative and timely means to ship our products or fuels at a reasonable cost, which could lead to interruptions or slowdowns in our businesses or increases in our costs.

The availability of rail cars can also affect our ability to transport our products. Rail cars can be used to transport many different types of products across all of our segments. If owners sell or lease rail cars for use in other industries, we may not have enough rail cars to transport our products.

We have long-term agreements with shipping companies to provide ships to transport our aggregates products from our Bahamas and Nova Scotia operations to various coastal ports. These contracts have varying expiration dates ranging from 2023 to 2027 and generally contain renewal options. Our inability to renew these agreements or enter into new ones with other shipping companies could affect our ability to transport our products.

Some of our product is distributed by barge along rivers in Ohio and West Virginia. We may continue to experience, to a lesser degree, risks associated with distributing our products by barges, including significant delays, disruptions or the non-availability of our barge transportation system that could negatively affect our operations, water levels that could affect our ability to transport our products by barge, and barges that may not be available in quantities that we might need from time to time to support our operations.

Our articles of incorporation and bylaws and North Carolina law may inhibit a change in control that you may favor.

Our restated articles of incorporation and restated bylaws and North Carolina law contain provisions that may delay, deter or inhibit a future acquisition of us not approved by our Board of Directors. This could occur even if our shareholders are offered an attractive value for their shares or if many or even a majority of our shareholders believe the takeover is in their best interest. These provisions are intended to encourage any person interested in acquiring us to negotiate with and obtain the approval of our Board of Directors in connection with the transaction. Provisions that could delay, deter, or inhibit a future acquisition include the following:

- the ability of the Board of Directors to establish the terms of, and issue, preferred stock without shareholder approval;
- the requirement that our shareholders may only remove directors for cause;

- the inability of shareholders to call special meetings of shareholders; and
- super-majority shareholder approval requirements for business combination transactions with certain five percent shareholders.

Additionally, the occurrence of certain change-of-control events could result in an event of default under certain of our existing or future debt instruments.

ITEM 1B – UNRESOLVED STAFF COMMENTS

There are no unresolved written comments that were received from the staff of the SEC one hundred and eighty (180) days or more before the end of our fiscal year relating to our periodic or current reports under the Exchange Act.

ITEM 2 – PROPERTIES

Building Materials Business

As of December 31, 2019, the Company processed or shipped aggregates from more than 300 quarries, underground mines, and distribution yards in 27 states, Canada, and the Bahamas, of which 124 are located on land owned by the Company free of major encumbrances, 59 are on land owned in part and leased in part, 109 are on leased land, and 10 are on facilities neither owned nor leased, where raw materials are removed under an agreement. The Company's aggregates reserves, on the average, represent 89 years at current production levels. However, certain locations may be subject to more limited reserves and may not be able to expand. In addition, as of December 31, 2019, the Company processed and shipped ready mixed concrete and/or asphalt products from 148 properties in five states, of which 124 are located on land owned by the Company free of major encumbrances, one is on land owned in part and leased in part, and 23 are on leased land.

The Company uses various drilling methods, depending on the type of aggregate, to estimate aggregates reserves that are economically mineable. The extent of drilling varies and depends on whether the location is a potential new site ("greensite"), an existing location, or a potential acquisition. More extensive drilling is performed for potential greensites and acquisitions, and in rare cases, the Company may rely on existing geological data or results of prior drilling by third parties. Subsequent to drilling, selected core samples are tested for soundness, abrasion resistance, and other physical properties relevant to the aggregates industry. If the reserves meet the Company's standards and are economically mineable, then they are either leased or purchased.

The Company estimates proven and probable reserves based on the results of drilling. Proven reserves are reserves of deposits designated using closely spaced drill data, and based on that data the reserves are believed to be relatively homogenous. Proven reserves have a certainty of 85% to 90%. Probable reserves are reserves that are inferred utilizing fewer drill holes and/or assumptions about the economically mineable reserves based on local geology or drill results from adjacent properties. The degree of certainty for probable reserves is 70% to 75%. In determining the amount of reserves, the Company's policy is to not include calculations that exceed certain depths, so for deposits, such as granite, that typically continue to depths well below the ground, there may be additional deposits that are not included in the reserve calculations. The Company also deducts reserves not available due to property boundaries, set-backs, and plant configurations, as deemed appropriate when estimating reserves. The Company uses the same methods of analysis to evaluate and estimate the amount of its aggregates reserves used in the cement manufacturing process for its cement product line as it does for its aggregates product line. For additional information on the Company's assessment of reserves, see "Management's Discussion and Analysis of Financial Condition and Results of Operations – Other Financial Information - Critical Accounting Policies and Estimates - Property, Plant and Equipment" included under Article 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," of this Form 10-K.

Set forth in the tables below are the Company's estimates of reserves of recoverable aggregates (hard rock and sand and gravel) of suitable quality for economic extraction, shown on a state-by-state basis, and the Company's total annual production for the last three years, along with the Company's estimate of years of production available, shown on a segment-by-segment basis. The number of producing quarries shown on the table includes underground mines. The Company's reserve estimates for the last two years are shown for comparison purposes on a state-by-state basis. The changes in reserve estimates at a particular state level from year to year reflect the tonnages of reserves on locations that have been opened or closed during the year, whether by acquisition, disposition, or otherwise; production and sales in the normal course of business; additional reserve estimates or refinements of the Company's existing reserve estimates; opening of additional reserves at existing locations; the depletion of reserves at existing locations; and other factors. The Company evaluates its

reserve estimates primarily on a Company-wide, or segment-by-segment basis, and does not believe comparisons of changes in reserve estimates on a state-by-state basis from year to year are particularly meaningful. The Company's estimate of reserves shown in the tables below include reserves used in the Company's cement product line and Magnesia Specialties business.

State	Number of Producing Quarries	Tonnage of Reserves for each general type of aggregate at 12/31/18 (in thousands)		Tonnage of Reserves for each general type of aggregate at 12/31/19 (in thousands)		Change in Tonnage from 2018 (in thousands)		Percentage of aggregate reserves located at an existing quarry, and reserves not located at an existing quarry.		Percentage of aggregate reserves on land that has not been zoned for quarrying.* **	Percent of reserves owned and percent leased	
	2019	Hard Rock	S & G	Hard Rock	S & G	Hard Rock	S & G	At Quarry	Not at Quarry		Owned	Leased
Alabama	4	174,754	11,623	**171,371**	**11,623**	(3,382)	0	100%	0%	0%	55%	45%
Arkansas	3	230,811	0	**242,504**	**0**	11,692	0	100%	0%	0%	48%	52%
Colorado	10	754,812	117,204	**750,309**	**182,829**	(4,503)	65,625	91%	9%	0%	19%	81%
Florida	1	122,724	0	**122,022**	**0**	(702)	0	100%	0%	0%	36%	64%
Georgia	18	2,185,263	19,380	**2,168,486**	**18,813**	(16,777)	568	97%	3%	0%	83%	17%
Indiana	10	481,120	60,392	**476,879**	**73,678**	(4,240)	13,286	100%	0%	0%	52%	48%
Iowa	25	727,232	21,802	**703,737**	**19,852**	(23,495)	1,951	100%	0%	0%	30%	70%
Kansas	3	75,210	0	**68,928**	**0**	(6,283)	0	100%	0%	8%	40%	60%
Kentucky	6	179,959	24,206	**177,666**	**21,641**	(2,293)	2,565	100%	0%	0%	70%	30%
Louisiana	2	0	7,830	**0**	**7,545**	0	285	100%	0%	0%	0%	100%
Maryland	8	883,671	6,902	**876,493**	**6,636**	(7,178)	266	100%	0%	0%	99%	1%
Minnesota	2	320,612	0	**295,629**	**0**	(24,983)	0	64%	36%	0%	50%	50%
Mississippi	0	0	67,238	**0**	**67,238**	0	0	100%	0%	0%	100%	0%
Missouri	3	347,721	0	**340,588**	**0**	(7,133)	0	90%	10%	0%	5%	95%
Nebraska	6	158,074	23,851	**157,475**	**30,476**	(600)	6,895	100%	0%	0%	47%	53%
Nevada	1	134,507	0	**133,814**	**0**	(693)	0	99%	1%	0%	92%	8%
North Carolina	37	3,367,662	1,696	**3,324,826**	**1,630**	(42,836)	67	74%	26%	0%	74%	26%
Ohio***	11	571,805	115,656	**566,887**	**102,932**	(4,918)	12,724	44%	56%	0%	96%	4%
Oklahoma	9	1,191,901	11,647	**1,174,891**	**11,571**	(17,010)	76	100%	0%	0%	86%	14%
Pennsylvania	1	4,531	0	**4,331**	**0**	(200)	0	100%	0%	0%	100%	0%
South Carolina	10	773,008	77,893	**767,473**	**75,773**	(5,535)	2,120	97%	3%	0%	82%	18%
Tennessee	2	104,066	0	**13,372**	**0**	(724)	0	100%	0%	0%	36%	64%
Texas****	25	2,481,790	137,278	**2,458,474**	**137,069**	(23,317)	209	100%	0%	0%	61%	39%
Utah	1	22,147	0	**21,566**	**0**	(582)	0	100%	0%	0%	0%	100%
Virginia	5	333,860	0	**328,653**	**0**	(5,207)	0	100%	0%	0%	60%	40%
Washington	2	6,274	17,097	**1,014**	**16,853**	(5,260)	245	100%	0%	0%	94%	6%
West Virginia	1	23,243	0	**16,425**	**0**	(6,818)	0	100%	0%	0%	66%	34%
Wyoming	2	153,092	0	**150,418**	**0**	(2,674)	0	100%	0%	0%	43%	57%
U. S. Total	**208**	**15,809,851**	**721,427**	**15,604,202**	**786,158**	**(205,648)**	**64,732**	**91%**	**9%**	**0%**	**67%**	**33%**
Non-U. S.	2	840,939	0	**833,010**	**0**	(7,929)	0	100%	0%	0%	97%	3%
Grand Total	**210**	**16,650,790**	**721,427**	**16,437,213**	**786,158**	**(213,577)**	**64,732**					

* The Company calculates its aggregate reserves for purposes of this table based on land that has been zoned for quarrying and land for which the Company has determined zoning is not required.

** The Company may own additional land adjacent or near existing quarries on which reserves may be located but does not include such reserves in these calculations if zoning is required but has not been obtained.

*** The Company's reserves presented in the State of Ohio include dolomitic limestone reserves used in the business of the Magnesia Specialties segment.

**** The Company's reserves presented in the State of Texas include limestone reserves used in the business of the cement product line.

Reportable Segment	Total Annual Production (in tons) (in thousands) *For year ended December 31* 2019	2018	2017	Number of years of production available at December 31, 2019
Mid-America Group	**91,108**	78,137	70,340	89
Southeast Group	**28,465**	25,328	22,274	123
West Group	**74,483**	71,538	74,184	75
Total Aggregates Product Line	**194,056**	175,003	166,798	89

Cement Product Line

As of December 31, 2019, the Company, through its subsidiaries, processed or shipped cement from seven properties in two states, of which five are located on land owned by the Company free of major encumbrances and two are on leased land. The Company's cement product line has production facilities located at two sites in Texas: Midlothian, Texas, south of Dallas/Fort Worth; and Hunter, Texas, north of San Antonio. The following table summarizes certain information about the Company's cement manufacturing facilities at December 31, 2019:

Plant	Rated Annual Productive Capacity-Tons of Clinker	Manufacturing Process	Service Date	Internally Estimated Minimum Reserves—Years
Midlothian, TX	2,400,000	Dry	2001	65
Hunter, TX	2,100,000	Dry	2013, 1981	140
Total	4,500,000			

Reserves identified with the facilities shown above are contained on approximately 2,844 acres of land owned by the Company. As of December 31, 2019, the Company estimated its total proven and probable limestone reserves on such land to be approximately 687 million tons.

The Company's cement manufacturing facilities include kilns, crushers, pre-heaters/calciners, coolers, finish mills and other equipment used to process limestone and other raw materials into cement, as well as equipment used to extract and transport the limestone from the adjacent quarries. These cement manufacturing facilities are served by rail and truck.

As of December 31, 2019, the Company, through its subsidiaries, also operated, directly or through third parties, four cement distribution terminals and owned the real estate at the California cement grinding and packaging facility it sold on September 30, 2015, which it expects to sell for non-cement use.

Magnesia Specialties Business

The Magnesia Specialties business currently operates major manufacturing facilities in Manistee, Michigan, and Woodville, Ohio. Both of these facilities are owned.

Other Properties

The Company's principal corporate office, which it owns, is located in Raleigh, North Carolina. The Company owns and leases various administrative offices for its five reportable business segments.

Condition and Utilization

The Company's principal properties, which are of varying ages and are of different construction types, are believed to be generally in good condition, are generally well maintained, and are generally suitable and adequate for the purposes for which they are used.

During 2019, the principal properties of the aggregates product line were believed to be utilized at average productive capacities of approximately 75% to 80% and were capable of supporting a higher level of market demand. The Company adjusts its production schedules to meet volume demand for its products. For example, during the Great Recession the Company reduced operating hours at a number of its facilities, closed some of its facilities, and temporarily idled some of its facilities. When business improved, the Company was able to gradually resume production at its normalized levels and increase production again as demand for its products increased.

During 2019, the Texas cement plants operated on average at 80% to 85% utilization. The Portland Cement Association ("PCA") has projected that cement consumption will slow modestly in 2020 from 2019, with the rate of change decreasing in 2020 to 1.7% from 2.4% in 2019. The cement product line's leadership, in collaboration with the aggregates and ready mixed concrete teams, have developed strategic plans regarding interplant efficiencies, as well as tactical plans addressing plant utilization and efficiency. Due to the "24/7/365" nature of cement operations, significant gains in plant utilization and efficiency are typically achieved only during plant shutdowns.

The Company expects future organic earnings growth to result from increased pricing, rationalization of the current assets and portfolio and/or further cost reductions. In the current operating environment, where steel utilization is at levels close to or below 70% and the strength of the United States dollar pressures product competitiveness in international markets, any unplanned change in costs or customers introduces volatility to the earnings of the Magnesia Specialties segment. The dolomitic lime business of the Magnesia Specialties segment operated at 80% utilization in 2019.

ITEM 3 – LEGAL PROCEEDINGS

From time to time claims of various types are asserted against the Company arising out of its operations in the normal course of business, including claims relating to land use and permits, safety, health, and environmental matters (such as noise abatement, blasting, vibrations, air emissions, and water discharges). Such matters are subject to many uncertainties, and it is not possible to determine the probable outcome of, or the amount of liability, if any, from, these matters. In the opinion of management of the Company (which opinion is based in part upon consideration of the opinion of counsel), based upon currently-available facts, it is remote that the ultimate outcome of any litigation and other proceedings will have a material adverse effect on the overall results of the Company's operations, its cash flows, or its financial condition. However, we cannot assure you that an adverse outcome in any of such litigation would not have a material adverse effect on the Company or its operating segments.

The Company was not required to pay any penalties in 2019 for failure to disclose certain "reportable transactions" under Section 6707A of the Internal Revenue Code.

See also "Note O: Commitments and Contingencies" of the "Notes to Financial Statements" of the Company's consolidated financial statements included under Item 8, "Financial Statements and Supplemental Data," of this Form 10-K and the "Environmental Regulation and Litigation" section included under Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," of this Form 10-K.

ITEM 4 – MINE SAFETY DISCLOSURES

The information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K (17 CFR 229.104) is included in Exhibit 95 to this Form 10-K.

Information about our Executive Officers

The following sets forth certain information regarding the executive officers of Martin Marietta as of February 21, 2020:

Name	Age	Present Position	Year Assumed Present Position	Other Positions and Other Business Experience Within the Last Five Years
C. Howard Nye	57	Chairman of the Board; Chief Executive Officer; President; President of Aggregates Business; Chairman of Magnesia Specialties Business	2014 2010 2006 2010 2007	
James A. J. Nickolas	49	Senior Vice President, Chief Financial Officer	2017	Principal Accounting Officer (March 2019-May 2019); Head, Corporate Development and Caterpillar Ventures, Caterpillar Inc. (January-July 2017), Group Chief Financial Officer of Caterpillar's Resources Industries segment (October 2014-December 2016)
Roselyn R. Bar	61	Executive Vice President; General Counsel; Corporate Secretary	2015 2001 1997	Senior Vice President (2005-2015)
Robert J. Cardin	56	Senior Vice President; Controller, and Chief Accounting Officer	2019	Vice President (March 2019-May 2019); Chief Accounting Officer, SWM International (2013-2019), Interim CFO, SWM International (April 2015-October 2015)
Daniel L. Grant	65	Senior Vice President, Strategy & Development	2013	
Craig M. LaTorre	52	Senior Vice President, Chief Human Resource Officer	2019	Vice President, Human Resources (July 2018-March 2019); Senior Vice President; and Chief Human Resources Officer (2013-2018), Andeavor (formerly known as Tesoro Corporation)
John P. Mohr	55	Senior Vice President, Chief Information Officer	2017 2015	Vice President (2015-2017); Vice President, Information Services, Liggett Vector Brands (2007-2015)

PART II

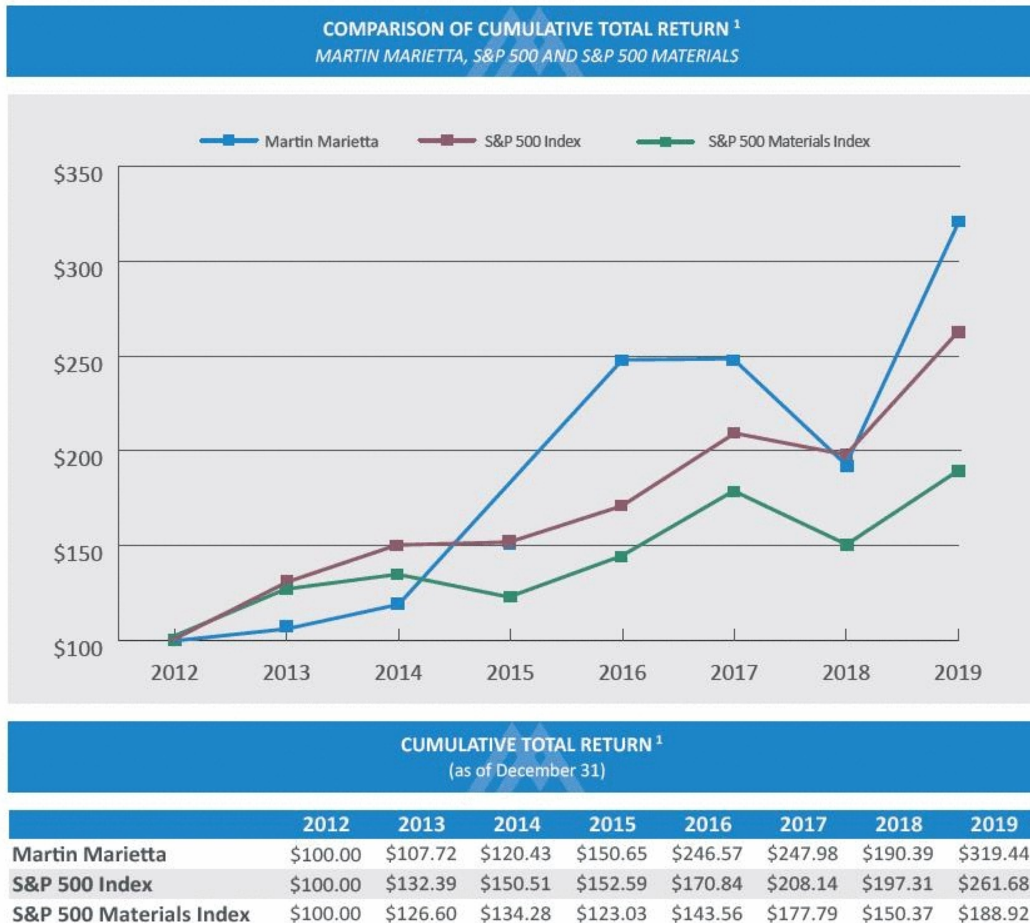
ITEM 5 – MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information and Holders

The Company’s common stock, $.01 par value, is traded on the New York Stock Exchange (“NYSE”) (Symbol: MLM). There were 834 holders of record of the Company’s common stock as of February 14, 2020.

Common Stock Performance Graph

The following graph and accompanying table compare the seven-year cumulative total return from December 31, 2012 to December 31, 2019 for (a) the Company’s common stock, (b) the Standard & Poor’s 500 Composite Stock Index, and (c) the Standard & Poor’s 500 Materials Index.



	2012	2013	2014	2015	2016	2017	2018	2019
Martin Marietta	$100.00	$107.72	$120.43	$150.65	$246.57	$247.98	$190.39	$319.44
S&P 500 Index	$100.00	$132.39	$150.51	$152.59	$170.84	$208.14	$197.31	$261.68
S&P 500 Materials Index	$100.00	$126.60	$134.28	$123.03	$143.56	$177.79	$150.37	$188.92

[1]Assumes that the Company’s common stock and each index was $100, with quarterly reinvestment of dividends.

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs[1]	Maximum Number of Shares that May Yet be Purchased Under the Plans or Programs
October 1, 2019 — October 31, 2019	20,290	$ 264.86	20,290	13,865,827
November 1, 2019 — November 30, 2019	62,752	$ 258.09	62,752	13,803,075
December 1, 2019 — December 31, 2019	71,507	$ 270.99	71,507	13,731,568
Total	154,549	$ 264.95	154,549	13,731,568

1 The Company's stock repurchase program, which currently authorizes the repurchase of 20 million shares of common stock, is approved by the Board of Directors from time to time, and updated as appropriate by the Board of Directors, and announced to the public by press release. The latest announcement on this topic was the Company's press release dated February 10, 2015 that its Board of Directors had authorized the repurchase of up to 20 million shares of its outstanding common stock, which included 5 million shares authorized under the Company's previous share repurchase program. Previous press releases announcing prior share repurchase programs and the related amounts of common stock included under the share repurchase authorizations were as follows: (i) press release dated August 15, 2007 (5 million shares); (ii) press release dated February 22, 2006 (5 million shares); and (iii) May 6, 1994 (2.5 million shares).

ITEM 6 – SELECTED FINANCIAL DATA

The selected financial data below should be read in conjunction with Item 7 of this Form 10-K, "Management's Discussion and Analysis of Financial Condition and Results of Operations," as well as the Company's consolidated financial statements and related notes included under Item 8, "Financial Statements and Supplemental Data," of this Form 10-K.

Five Year Selected Financial Data

(in millions, except per share data)	2019	2018	2017	2016	2015
Consolidated Operating Results					
Products and services revenues[1]	**$ 4,422.3**	$ 3,980.4	$ 3,723.5	$ 3,578.6	$ 3,269.2
Freight revenues[1]	**316.8**	263.9	242.1	240.1	270.4
Total revenues	**4,739.1**	4,244.3	3,965.6	3,818.7	3,539.6
Cost of revenues - products and services	**3,239.1**	3,009.8	2,749.5	2,665.0	2,541.2
Cost of revenues - freight	**321.0**	267.9	244.2	242.0	271.5
Total cost of revenues[2]	**3,560.1**	3,277.7	2,993.7	2,907.0	2,812.7
Gross Profit[2]	**1,179.0**	966.6	971.9	911.7	726.9
Selling, general and administrative expenses[2]	**302.7**	280.6	262.1	241.6	210.8
Acquisition-related expenses, net	**0.5**	13.5	8.6	0.9	6.3
Other operating (income) and expenses, net	**(9.1)**	(18.2)	0.8	(8.1)	15.6
Earnings from Operations[2]	**884.9**	690.7	700.4	677.3	494.2
Interest expense	**129.3**	137.1	91.5	81.7	76.3
Other nonoperating expenses and (income), net[2]	**7.3**	(22.5)	(10.0)	(11.4)	4.1
Earnings before income tax expense (benefit)	**748.3**	576.1	618.9	607.0	413.8
Income tax expense (benefit)	**136.3**	105.7	(94.5)	181.6	124.9
Consolidated net earnings	**612.0**	470.4	713.4	425.4	288.9
Less: Net earnings attributable to noncontrolling interests	**0.1**	0.4	0.1	—	0.1
Net Earnings Attributable to Martin Marietta	**$ 611.9**	$ 470.0	$ 713.3	$ 425.4	$ 288.8
Net Earnings Attributable to Martin Marietta Per Common Share (see Note A):					
Basic attributable to common shareholders	**$ 9.77**	$ 7.46	$ 11.30	$ 6.66	$ 4.31
Diluted attributable to common shareholders	**$ 9.74**	$ 7.43	$ 11.25	$ 6.63	$ 4.29
Cash Dividends Per Common Share	**$ 2.06**	$ 1.84	$ 1.72	$ 1.64	$ 1.60

(in millions)	2019	2018[3]	2017[3]	2016	2015
Condensed Consolidated Balance Sheet Data					
Total current assets[4]	**$ 1,426.7**	$ 1,365.8	$ 2,631.2	$ 1,086.4	$ 1,081.6
Property, plant and equipment, net	**5,206.0**	5,157.2	3,592.8	3,423.4	3,156.0
Goodwill	**2,396.8**	2,399.1	2,160.3	2,159.3	2,068.2
Other intangibles, net	**486.8**	501.3	506.3	511.3	510.6
Other noncurrent assets[4,5]	**615.3**	128.0	101.9	120.5	141.2
Total Assets	**$ 10,131.6**	$ 9,551.4	$ 8,992.5	$ 7,300.9	$ 6,957.6
Current liabilities – other[5]	**$ 498.5**	$ 396.7	$ 394.3	$ 366.6	$ 347.9
Current maturities of long-term debt[4]	**340.0**	390.0	299.9	180.0	18.7
Long-term debt[4]	**2,433.6**	2,730.4	2,727.3	1,506.1	1,550.1
Deferred income taxes, net	**733.0**	705.6	410.7	663.0	583.5
Other noncurrent liabilities[5]	**773.2**	379.3	477.8	442.6	397.2
Shareholders' equity	**5,350.8**	4,946.4	4,679.7	4,140.0	4,057.3
Noncontrolling interests	**2.5**	3.0	2.8	2.6	2.9
Total Liabilities and Equity	**$ 10,131.6**	$ 9,551.4	$ 8,992.5	$ 7,300.9	$ 6,957.6

1 Amounts for 2015-2017 may not equal amounts reported in the Company's prior years' Forms 10-K as amounts have been reclassified to conform to current year revenue presentation.

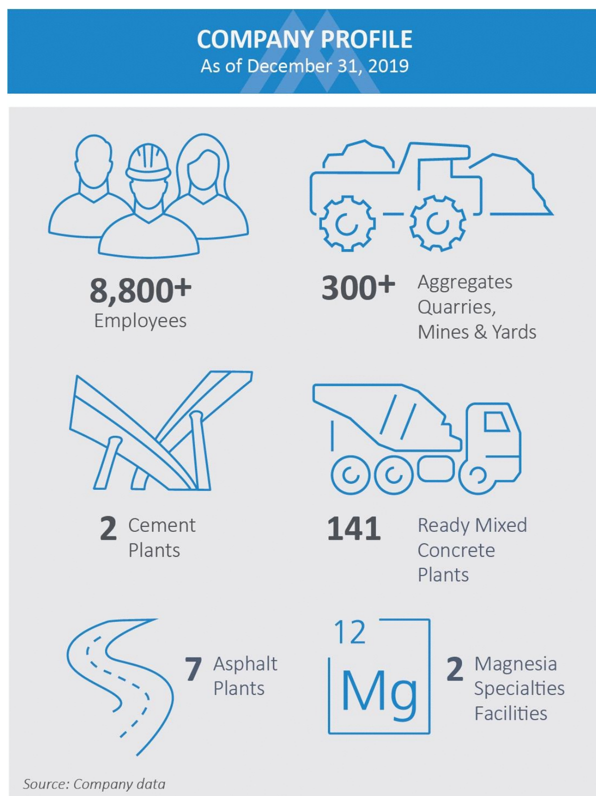
[2] Amounts for 2015-2016 may not equal amounts reported in the Company's prior years' Forms 10-K as amounts have been reclassified to reflect the adoption of the Accounting Standards Update 2017-07, *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost.*

[3] The 2018 balance sheet reflects the acquisition of Bluegrass Materials Company ("Bluegrass") completed on April 27, 2018. The 2017 balance sheet reflects $1.1 billion of cash and long-term debt issued in anticipation of closing the Bluegrass acquisition.

[4] Balance sheets reflect the adoption of Accounting Standards Update 2015-03, *Simplifying the Presentation of Debt Issuance Costs*.

[5] The 2019 balance sheet reflects the adoption of ASC 842. The operating lease right-of-use assets are included in other noncurrent assets, and operating lease liabilities are included in other current and noncurrent liabilities.

ITEM 7 – MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESU OPERATIONS



INTRODUCTORY OVERVIEW

Martin Marietta Materials, Inc. (the "Company" or "Martin Marietta") is a natural resource-based building materials company. The Company supplies aggregates (crushed stone, sand and gravel) through its network of more than 300 quarries, mines and distribution yards in 27 states, Canada and the Bahamas. In the western United States, Martin Marietta also provides cement and downstream products, namely ready mixed concrete, asphalt and paving services, in markets where the Company has a leading aggregates position. Specifically, the Company has two cement plants in Texas and ready mixed concrete and asphalt operations in Texas, Colorado, Louisiana, Arkansas and Wyoming. Paving services are exclusively in Colorado. The Company's heavy-side building materials are used in infrastructure, nonresidential and residential construction projects. Aggregates are also used in agricultural, utility and environmental applications and as railroad ballast. The aggregates, cement, ready mixed concrete, asphalt and paving product lines are reported collectively as the "Building Materials" business.

As more fully discussed in the *Consolidated Strategic Objectives* section, geography is critically important for the Building Materials business. The Company conducts its Building Materials business through three reportable segments, organized by geography: Mid-America Group, Southeast Group and West Group. The Mid-America and Southeast Groups provide aggregates products only. The West Group provides aggregates, cement and downstream products and services. Further, the following five states accounted for 72% of the Building Materials business 2019 total products and services revenues: Texas, Colorado, North Carolina, Georgia and Iowa.

BUILDING MATERIALS BUSINESS
As of December 31, 2019

Reportable Segments	Mid-America Group	Southeast Group	West Group
Operating Locations	Indiana, Iowa, northern Kansas, Kentucky, Maryland, Minnesota, Missouri, eastern Nebraska, North Carolina, Ohio, Pennsylvania, South Carolina, Virginia, Washington and West Virgina	Alabama, Florida, Georgia, southwestern South Carolina, Tennessee, Nova Scotia and the Bahamas	Arkansas, Colorado, southern Kansas, Louisiana, western Nebraska, Nevada, Oklahoma, Texas, Utah and Wyoming
Product Lines	Aggregates	Aggregates	Aggregates, Cement, Ready Mixed Concrete, Asphalt and Paving Services
Plant Types	Quarries, Mines and Distribution Facilities	Quarries, Mines and Distribution Facilities	Quarries, Mines, Plants, and Distribution Facilities
Modes of Transportation	Truck and Railcar	Truck, Railcar and Ship	Truck and Railcar

The Building Materials business is a mature, cyclical business, dependent on activity within the construction marketplace. As of December 31, 2019, the nation's current economic expansion, which started in June 2009, has lasted 126 months and is the longest economic recovery in history. By comparison, the average trough-to-peak expansionary cycle since 1938 was 60 months. During the current economic expansion, however, governmental uncertainty, labor shortages and logistical challenges have tempered the recovery pace of growth of heavy construction activity, resulting in a slow, steady, extended construction cycle that is expected to continue over the next several years. The level of economic recovery varies within the Company's geographic footprint.

Magnesia Specialties

The Company operates a Magnesia Specialties business with production facilities in Michigan and Ohio. The Magnesia Specialties business produces magnesia-based chemicals products used in industrial, agricultural and environmental applications. It also produces dolomitic lime sold primarily to customers in the steel and mining industries. Magnesia Specialties' products are shipped to customers worldwide.

Consolidated Strategic Objectives

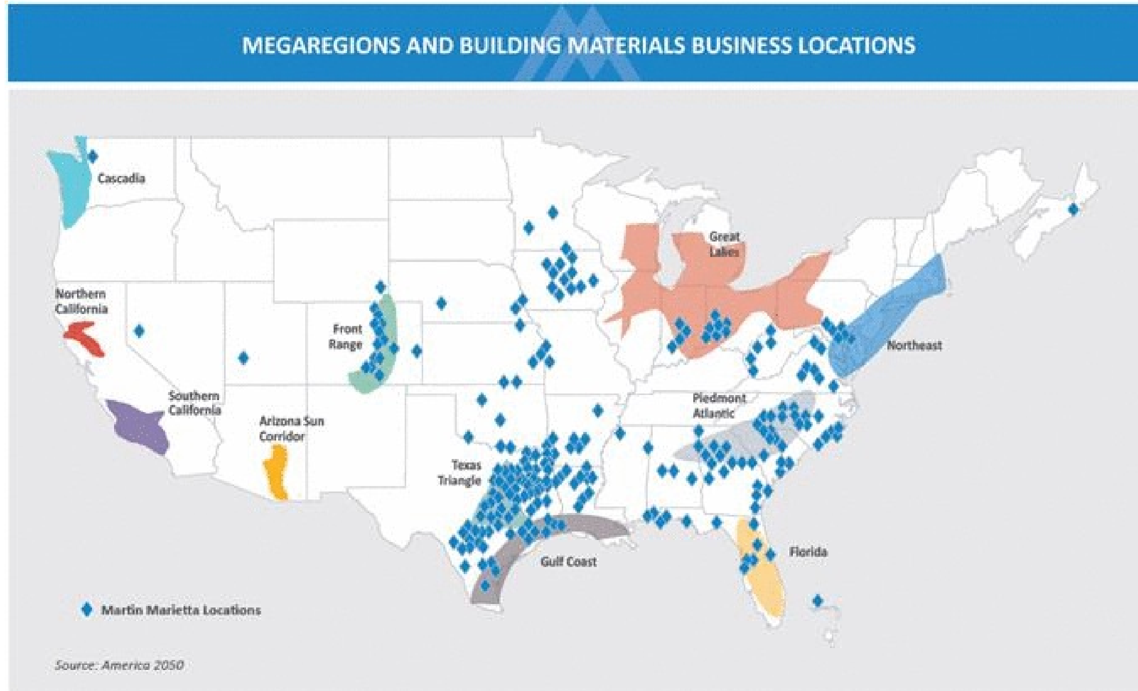
The Company's strategic planning process, or **S**trategic **O**perating **A**nalysis and **R**eview (SOAR), provides the framework for

execution of Martin Marietta's long-term strategic plan. Guided by this framework and considering the cyclicality of the Building Materials business, the Company determines capital allocation priorities to maximize long-term shareholder value. The Company's strategy includes ongoing evaluation of aggregates-led opportunities of scale in new domestic markets (i.e., platform acquisitions), expansion through acquisitions that complement existing operations (i.e., bolt-on acquisitions), divestitures of assets that are not consistent with stated strategic goals, and arrangements with other companies engaged in similar or complementary businesses. The Company finances such opportunities with the goal of preserving its financial flexibility by having a leverage ratio (consolidated debt-to-consolidated earnings before interest, taxes, depreciation and amortization, or EBITDA) within a target range of 2.0 times to 2.5 times within a reasonable time following the completion of a debt-financed transaction.

The Company, by purposeful design, will continue to be an aggregates-led business (aggregates product revenues represented 62% of 2019 total consolidated products and services revenues) that focuses on markets with strong, underlying growth fundamentals where it can sustain or achieve a leading market position. Driven by this intentional approach, the Company has leading positions in 90% of its markets. As part of its long-term strategic plan, the Company may pursue strategic cement and targeted downstream opportunities. For Martin Marietta, strategic cement and targeted downstream operations are located in vertically-integrated markets where the Company has, or envisions a clear path toward, a leading aggregates position. Additionally, strategic cement operations are attractive where market supply cannot be meaningfully interdicted by water.

Generally, the Company's building materials products are both sourced and sold locally. As a result, geography is critically important when assessing market attractiveness and growth opportunities. Attractive geographies exhibit (a) population growth and/or population density, both of which are drivers of heavy-side building materials consumption; (b) business and employment diversity, drivers of greater economic stability; and (c) a superior state financial position, a driver of public infrastructure growth and support.

In order to assess population growth and density, the Company focuses on the megaregions of the United States. Megaregions are large networks of metropolitan population centers covering thousands of square miles. According to *America 2050*, a planning and policy program of the Regional Plan Association, a majority of the nation's population and economic growth through 2050 will occur in 11 megaregions. The Company has a presence in most of the megaregions. As evidence of the successful execution of SOAR, the Company's leading positions in the Texas Triangle and Colorado's Front Range megaregions and its enhanced position in the Piedmont Atlantic, primarily in the Atlanta area, are the results of acquisitions since 2011. Additionally, the 2018 acquisition of Bluegrass Materials Company (Bluegrass) provided the Company with a new growth platform within the southern portion of the Northeast megaregion. The Company has a legacy presence in the southeastern portion of the Great Lakes megaregion, encompassing operations in Indiana and Ohio. The megaregions and the Company's key states are more fully discussed in the *Building Materials Business' Key Considerations* section.



In considering business and employment diversity, the Company focuses its geographic footprint along significant transportation corridors, particularly where land is readily available for the construction of fulfillment and/or data centers. The retail sector values transportation corridors, as logistics and distribution are critical considerations for construction supporting that industry. In addition, technology companies view these areas as attractive locations for data centers.

Additionally, the Company considers a state's financial position in determining the opportunities and attractiveness of areas for expansion or development. In this assessment, a state's financial health rating, issued by S&P Global Ratings and where AAA is the highest score, is reviewed. The Company's top ten revenue-generating states have been assigned a financial health rating of AA or AAA. The Company also reviews the state's ingenuity to securing additional infrastructure sourcing.

In line with the Company's strategic objectives, management's overall focus includes the following items:

- Upholding the Company's commitment to its mission, vision and values
- Navigating effectively through a slow-and-steady construction cycle, balancing investment and cost decisions against expected shipment volumes
- Tracking shifts in population trends, as well as local, state and national economic conditions, to ensure changing trends are reflected against the execution of the strategic plan
- Integrating acquired businesses efficiently to maximize the return on the investment
- Allocating capital in a manner consistent with the following long-standing priorities while maintaining financial flexibility
  - Acquisitions
  - Organic capital investment
  - Return of cash to shareholders through both meaningful and sustainable dividends and share repurchases

2019 Performance Highlights

Achieved Leading Safety Performance:

- Record company-wide Lost Time Incident Rate (LTIR) of 0.20, the third consecutive year of world-class or better LTIR thresholds
- Total Injury Incident Rate (TIIR) of 1.18; with acquired Bluegrass operations improving to heritage TIIR levels

Achieved Record Financial Performance:

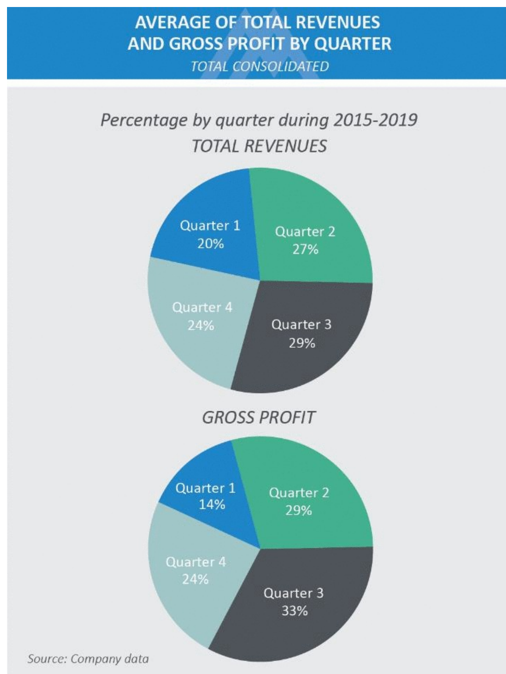
The Company achieved record total revenues, gross profit, earnings from operations and Adjusted EBITDA (defined in *Results of Operations* section), driven by strong customer demand and improved pricing and profitability across the majority of the Building Materials business. The Company achieved its eighth consecutive year of growth for revenues, gross profit, Adjusted EBITDA and earnings per diluted share. The Company's commitment to safety and operational excellence resulted in the following financial performance (comparisons with 2018):

- Record consolidated total revenues of $4.74 billion compared with $4.24 billion, an increase of 11.7%
- Record gross profit of $1.18 billion compared with $966.6 million, an increase of 22.1%
- Selling, general and administrative (SG&A) expenses representing 6.4% of total revenues, a 20-basis-point improvement
- Net earnings attributable to Martin Marietta of $611.9 million compared with $470.0 million, an increase of 30.2%
- Earnings per diluted share of $9.74 compared with $7.43
- Record consolidated Adjusted EBITDA of $1.25 billion, an increase of 14.9%
- Aggregates product line pricing increase of 4.2% and shipment growth of 11.7%
- Magnesia Specialties' total revenues of $271.3 million and earnings from operations of $83.6 million
- Operating cash flow of $966.1 million

Continued Disciplined Execution Against Capital Allocation Priorities:

- Dividend increase of 15% in August 2019, resulting in total annual dividends paid of $129.8 million, or $2.06 per share
- Repurchased 0.4 million shares of common stock for $98.2 million
- Net debt repayment of $350 million; return to leverage ratio within targeted range

BUSINESS ENVIRONMENT



Building Materials Business

The Building Materials business serves customers in the construction marketplace. The business' profitability is sensitive to national, regional and local economic conditions and cyclical swings in construction spending, which are in turn affected by fluctuations in levels of public-sector infrastructure funding; interest rates; access to capital markets; and demographic, geographic, employment and population dynamics.

The heavy-side construction business, inclusive of much of the Company's operations, is conducted outdoors. Therefore, erratic weather patterns, precipitation and other weather-related conditions, including flooding, hurricanes, snowstorms, cold temperatures and droughts, can significantly affect production schedules, shipments, costs, efficiencies and profitability. Generally, the financial results for the first and fourth quarters are subject to the impacts of winter weather, while the second and third quarters are subject to the impacts of heavy precipitation. The impacts of erratic weather patterns are more fully discussed in the *Building Materials Business' Key Considerations* section.

Product Lines

Aggregates are an engineered, granular material consisting of crushed stone and sand and gravel, manufactured to specific sizes, grades and chemistry for use primarily in construction applications. The Company's operations consist primarily of open pit quarries; however, the Company is also the largest operator of underground aggregates mines in the United States, with 14 active underground mines located in the Mid-America Group. The Company's aggregates reserves represent 89 years on average at the current production level.

Cement is the basic binding agent used to bind water, aggregates and sand in the production of ready mixed concrete. The Company has a strategic and leading cement position in the Texas market, with production facilities in Midlothian, Texas, south of Dallas/Fort Worth, and Hunter, Texas, north of San Antonio. These two facilities produce Portland and specialty cements, have a combined annual capacity of 4.5 million tons, and operated at 80% to 85% utilization in 2019. The Midlothian plant has a permit that allows for annual capacity expansion of 0.8 million tons. In addition to the two production facilities, the Company operates several cement distribution terminals. Calcium carbonate in the form of limestone is the principal raw material used in the production of cement. The Company owns more than 600 million tons of limestone reserves adjacent to its cement production plants.

Ready mixed concrete, a mixture primarily of cement, water, aggregates and sand, is measured in cubic yards and specifically batched or produced for customers' construction projects and then transported and poured at the project site. The aggregates used for ready mixed concrete is a washed material with limited amounts of fines (i.e., dirt and clay). The Company operates 141 ready mix plants in Texas, Colorado, Louisiana, Arkansas and Wyoming. Asphalt is most commonly used in surfacing roads and parking lots and consists of liquid asphalt, or bitumen, the binding medium, and aggregates. Similar to ready mixed concrete, each asphalt batch is produced to customer specifications. The Company's asphalt operations and paving services are located in Colorado. Market dynamics for these downstream product lines include a highly competitive environment and lower barriers to entry compared with aggregates and cement.

End-Use Trends

- *According to the U.S. Geological Survey, for the nine months ended September 30, 2019, the latest available governmental data, estimated construction aggregates consumption and cement consumption increased 6% and 4%, respectively, compared with the nine months ended September 30, 2018.*
- *National spending statistics for the twelve months ended December 31, 2019 versus the twelve months ended December 31, 2018, the latest available data, according to U.S. Census Bureau:*
  - *Total value of construction put in place decreased less than 1%*
  - *Public construction spending increased 7%*
  - *Private nonresidential construction market spending was flat*
  - *Private residential construction market spending decreased 5%*

The principal end-use markets of the Building Materials business are public infrastructure (i.e., highways; streets; roads; bridges; and schools); nonresidential construction (i.e., manufacturing and distribution facilities; industrial complexes; office buildings; large retailers and wholesalers; and energy-related activity); and residential construction (i.e., subdivision development; and single- and multi-family housing). Aggregates are also used in agricultural, utility and environmental applications and as railroad ballast, collectively comprising the ChemRock/Rail market.

Public infrastructure jobs can require several years to complete, while residential and nonresidential construction jobs are usually completed within one year. Generally, the purchase orders the Company receives from its customers do not contain firm quantity commitments, regardless of end-use market. Therefore, management does not utilize a Company backlog in managing its business.

The public infrastructure market accounted for 35% of the Company's aggregates shipments in 2019. Modestly improved weather compared with 2018 allowed transportation projects to advance. However, Company's shipments to this end-use market remain below the most recent five-year average of 39% and ten-year average of 45%.

While construction spending in the public and private market sectors is affected by economic cycles, the historic level of spending on public infrastructure projects has been comparatively more stable due to predictability of funding from federal, state and local governments, with approximately half of the funding from federal government and half from state and local governments in certain states. The *Fixing America's Surface Transportation Act* (FAST Act), signed into law on December 4, 2015, is the first long-term transportation funding bill in nearly a decade and authorizes $305 billion over fiscal years 2016 through 2020. Included with FAST Act funding is $300 million available for loans issued under *Transportation Infrastructure Finance and Innovation Act* (TIFIA). If a successor bill is not passed prior to the September 2020 expiration of the FAST Act, management expects Congressional continuing resolutions to be passed to continue federal highway funding at current levels. Public construction projects, once awarded, are seen through to completion. Thus, delays from weather or other factors typically serve to extend the duration of the construction cycle. State and local initiatives that support infrastructure funding, including gas tax increases and other ballot initiatives, are increasing in size and number as these governments recognize the need to play an expanded role in public infrastructure funding. In November 2019, 270 state and local ballot initiatives, 89% of all infrastructure funding measures up for vote, were approved and are estimated to generate over $9.6 billion in one-time and recurring revenues. Namely, Texas, Colorado, Georgia and North Carolina approved measures that will contribute a total of $8.1 billion to infrastructure funding, the majority of which are in Texas. Since 2010, 81% of transportation ballot initiatives have been approved by voters. Funding from the FAST Act, coupled with state and local transportation initiatives, has resulted in an acceleration of lettings (making contracts available for bidding) and contract awards in key states, including Texas, Colorado, North Carolina, Georgia and Florida. The pace of construction should accelerate and shipments to the public infrastructure market should return to historical levels as monies from both the federal government and state and local governments become awarded.

The nonresidential construction market accounted for 36% of the Company's aggregates shipments in 2019. While national nonresidential construction spending was relatively flat, the Company's shipments to this end use increased 22% compared with 2018, reflecting growth in the construction of distribution centers, warehouses, data centers, wind turbines and energy-sector projects in key states. The Dodge Momentum Index, a twelve-month leading indicator of construction spending for nonresidential building compiled by McGraw-Hill Construction and where the year 2000 serves as an index basis of 100, was 156.2 in December 2019 compared with 151.9 in December 2018. This suggests nonresidential construction activity will remain healthy over the next several years.

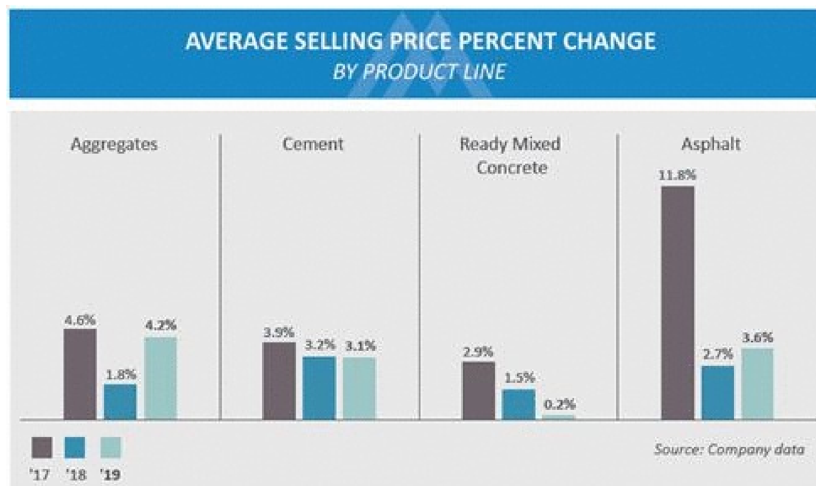
The residential construction market accounted for 22% of the Company's aggregates shipments in 2019. Although private residential construction spending decreased 5% for the twelve months ended December 31, 2019 compared with 2018 according to the U.S. Census Bureau, the Company's shipments increased 14% to this end use, reaffirming location matters. The residential construction market, like the nonresidential construction market, is interest rate sensitive and typically moves in direct correlation with economic cycles. The Company's exposure to residential construction is split between aggregates used in the construction of subdivisions (including roads, sidewalks, utilities and storm and sewage drainage), aggregates used in new single-family home construction and aggregates used in construction of multi-family units. Construction of both subdivisions and single-family homes is more aggregates intensive than construction of multi-family units. Through an economic cycle, multi-family construction generally begins early in the cycle and then transitions to single-family construction. Therefore, the timing of new subdivision starts, as well as new single-family housing permits, are strong indicators of residential volumes. Residential housing starts of 1.3 million units for the twelve months ended December 31, 2019 were flat compared with the comparable 2018 period, and remain below the 50-year historical annual average of 1.5 million units. For the twelve months ended December 31, 2019, national housing permits decreased 2.7% over the comparable period. The Company expects continued growth in the residential market driven by low interest rates, favorable demographics, job growth, land availability and efficient permitting.

The remaining 7% of the Company's 2019 aggregates shipments was to the ChemRock/Rail market, which includes ballast and agricultural limestone. Ballast is an aggregates product used to stabilize railroad track beds and, increasingly, concrete rail ties are being used as a substitute for wooden ties. Agricultural lime, a high-calcium carbonate material, is used as a supplement in animal feed, a soil acidity neutralizer and agricultural growth enhancer. Additionally, ChemRock/Rail includes rip rap, which is used as a stabilizing material to control erosion caused by water runoff at embankments, ocean beaches, inlets, rivers and streams, and high-calcium limestone, which is used as filler in glass, plastic, paint, rubber, adhesives, grease and paper. Chemical-grade, high-calcium limestone is used as a desulfurization material in utility plants.

Pricing Trends

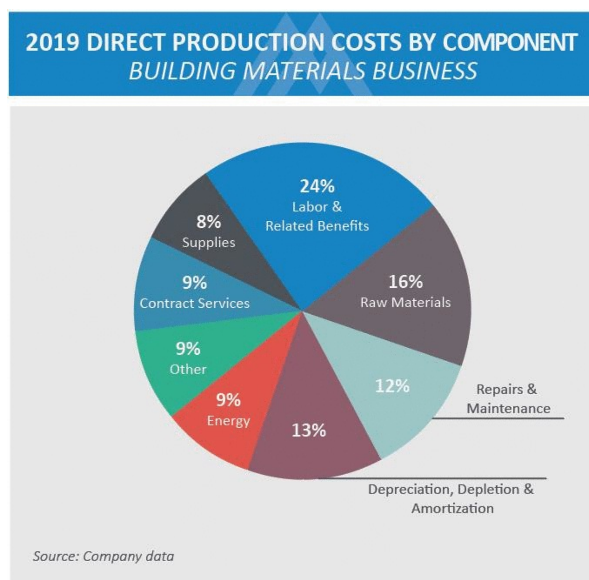
Pricing for construction projects is generally based on terms committing to the availability of specified products of a stated quantity at an agreed-upon price during a definitive period. Since infrastructure projects span multiple years, announced price changes can have a lag time before taking effect while the Company sells products under existing price agreements. Pricing escalators included in multi-year infrastructure contracts somewhat mitigate this effect. However, during periods of sharp or rapid increases in production costs, multi-year infrastructure contract pricing may provide only nominal pricing growth. Additionally, the Company may implement mid-year price increases, on a market-by-market basis, where appropriate. Pricing is determined locally and is affected by supply and demand characteristics of the local market.

In 2019, the average selling price for the aggregates product line increased 4.2%, in line with management's expectations.



Cost Structure

Direct production costs for the Building Materials business are components of cost of revenues incurred at the quarries, mines, distribution yards and facilities, cement plants, ready mixed concrete plants and asphalt plants. Cost of revenues also includes the cost of resale materials, freight expenses to transport materials from a producing quarry or cement plant to a distribution yard or facility and production overhead costs.



Generally, the significant components of direct production costs for the Building Materials business are (1) labor and related benefits; (2) raw materials; (3) depreciation, depletion and amortization (DDA); (4) repairs and maintenance; (5) energy; (6) contract services; and (7) supplies. In 2019, these categories represented 91% of the Building Materials business' total direct production costs.

Variable costs are expenses that fluctuate with the level of production volume, while fixed costs are expenses that do not vary based on production or sales volume. Accordingly, the Company's operating leverage can be substantial. Production is the key driver in determining the levels of variable costs, as it affects the number of hourly employees and related labor hours. Further, components of energy, supplies and repairs and maintenance costs also increase in connection with higher production volumes.

Generally, when the Company invests capital in facilities and equipment, increased capacity and productivity, along with reduced labor and repair costs, can offset increased fixed depreciation costs. However, the increased productivity and related efficiencies may not be fully realized in a lower-demand environment, resulting in under absorption of fixed costs.

Wage and benefit inflation and increases in labor costs may be somewhat mitigated by enhanced productivity in an expanding economy. Further, workforce reductions resulting from process automation and mobile fleet right-sizing, primarily in the aggregates operations, have mitigated rising labor costs. During economic downturns, the Company reviews its operations and, where practical, temporarily idles certain sites. The Company is able to serve these markets with other open facilities that are in close

proximity. In certain markets, management can create production "super crews" that work on a rotating basis at various locations within a district. For example, within a market, a crew may work three days per week at one quarry and the other two workdays at another quarry. This has allowed the Company to responsibly manage headcount in periods of lower demand.

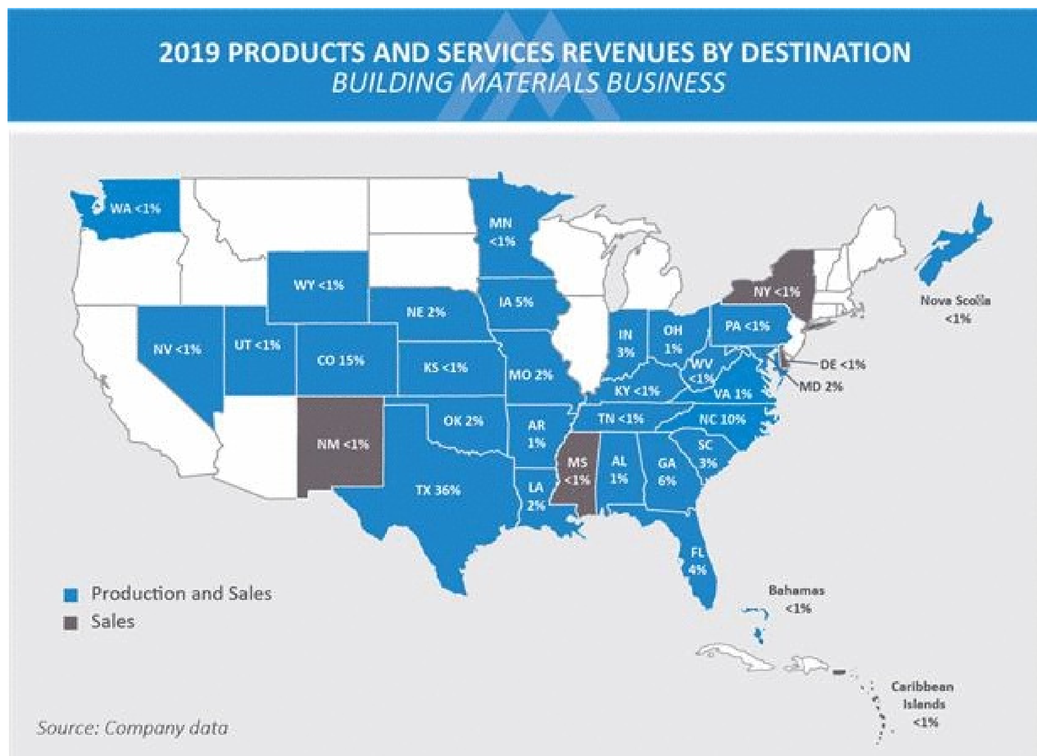
The Company's ready mixed concrete and asphalt product lines require the use of raw materials in the production of their products. Cement and liquid asphalt are key raw materials in the production of ready mixed concrete and asphalt, respectively. Therefore, fluctuations in prices for these raw materials directly affect the Company's operating results. Liquid asphalt prices were 14% higher in 2019 versus 2018, but may not always proportionately follow changes in the prices of other energy products (e.g., oil or diesel fuel) because of complexities in the refining process when converting a barrel of oil into other fuels and petrochemical products.

Cement production is a capital-intensive operation with high fixed costs to run plants that operate all day, every day, with the exception of maintenance shutdowns. Kiln and finishing mill maintenance typically requires a plant to be shut down for a period of time as repairs are made. In 2019 and 2018, the cement operations incurred outage costs of $26.3 million and $17.3 million, respectively. The increase in outage costs in 2019 compared with 2018 is primarily attributable to timing of scheduled maintenance shutdowns. The Company adjusts production levels in anticipation of planned maintenance shutdowns.

Diesel fuel represents the single largest component of energy costs for the Building Materials business. The average cost per gallon was $2.08 and $2.29 in 2019 and 2018, respectively. Changes in energy costs also affect the prices that the Company pays for related supplies, including explosives, conveyor belting and tires. Further, the Company's contracts of affreightment for shipping products on its rail and waterborne distribution network typically include provisions for escalations or reductions in the amounts paid by the Company if the price of fuel moves outside a stated range.

The impact of inflation on the Company's businesses has not been significant. Historically, the Company has achieved pricing growth in periods of inflation based on its ability to increase its selling prices in a normal economic environment.

Building Materials Business' Key Considerations



Geography is critically important as products are sourced and sold locally.

The Company's geographic footprint is primarily in attractive markets with strong, underlying growth characteristics, including population growth and/or population density and business and economic diversity, both of which generate demand for construction and the Company's Building Materials products. The Company has a presence in most of the megaregions of the United States, notably: Texas Triangle, Gulf Coast, Piedmont Atlantic, Front Range and Florida, each of which is discussed below. Additionally, Iowa is discussed below as a top five revenue-generating state and, while not part of a megaregion, is an attractive market that has diversified its economy over the past several years. Further, South Carolina is a top ten revenue-generating state and is discussed as part of the Piedmont Atlantic megaregion.

COMPANY'S LEADING STATES

	Population Growth[1]	Employment Growth[2]	Unemployment Rate[3]	Best for Business[4]
Texas	1st	1st	3.3%	2nd
Colorado	7th	9th	2.4%	9th
North Carolina	4th	5th	3.3%	1st
Georgia	5th	8th	2.9%	6th
Iowa	30th	47th	2.9%	17th
Florida	2nd	3rd	2.5%	5th
South Carolina	8th	21st	2.4%	16th

[1]For the twelve months ended July 1, 2019, per *U.S. Census Bureau*
[2]For the twelve months ended December 31, 2019, per *U.S. Bureau of Labor and Statistics*
[3]As of December 31, 2019, national unemployment rate - 3.5%, per *U.S. Bureau of Labor and Statistics*
[4]Per *Forbes* 2019 Ranking

Texas Triangle and Gulf Coast

The Texas Triangle is primarily defined by the anchoring metropolises of Dallas/Fort Worth, San Antonio and Houston. As of 2018, the Texas Triangle's population was estimated at more than 17 million residents, and is expected to exceed 21.5 million by 2030, representing approximately 62% of the population in Texas at that time. Growth in the Texas Triangle is not limited to residents as 53 Fortune 500 companies have headquarters in this megaregion. The Texas Triangle represents a diverse economy, including the finance, technology, transportation and goods and services sectors.

Uniquely, Houston, which has represented over 25% of Texas' gross domestic product (GDP) for the past eighteen years, is considered part of both the Gulf Coast and the Texas Triangle megaregions. In addition to Houston, cities in the Gulf Coast megaregion include New Orleans and Baton Rouge, Louisiana. The Gulf Coast megaregion's population is expected to exceed 16 million in 2025 and 23 million in 2050. The economy is driven by the energy, chemical and transportation sectors.

The Texas market remains one of the strongest in the United States, and according to the Bureau of Economic Analysis, as of 2018, the state's GDP comprised 9% of the nation's $18.6 trillion GDP. *Forbes* recognized Dallas, Fort Worth and Houston as the second, 20th and 34th best metros for business and careers, respectively. Texas continues to lead the nation in population growth, and its population is estimated to increase 35% from 2020 to 2040. Houston, San Antonio and Dallas are ranked fourth, seventh and ninth, respectively, as the most populous cities in the United States and have experienced employment

growth of 26%, 29% and 33%, respectively, over the ten-year period ended November 2019. Supported by population growth, Texas leads the country in total housing permits for the twelve months ended December 31, 2019.

The state's Department of Transportation (TxDOT) let $8.9 billion in construction projects in fiscal 2019 and has a letting budget of $7.1 billion for fiscal 2020 and $13.6 billion for fiscal 2021. In 2019, TxDOT announced the 2020 Unified Transportation Program, identifying planned investments totaling over $70 billion of infrastructure projects over the next ten years. Funding for highway construction comes from dedicated sources, including Propositions 1 and 7, as opposed to the use of general funds. Proposition 1, which passed in 2015, takes a portion of the oil and gas severance tax revenues and allocates them to the state highway fund. Proposition 7 is funded by state sales and use taxes and motor vehicle sales and rental taxes and is used for non-toll roads and certain transportation-related debt. For fiscal 2018 and 2019, these propositions provided $1.7 billion and $5.4 billion, respectively, to the state highway fund. Additionally, in November 2019, voters approved 94% of ballot measures that will provide an additional $7.8 billion of infrastructure funding. The strength of the Texas economy extends beyond infrastructure. In September 2019, Toyota announced a $391 million plant expansion in San Antonio, which, coupled with more Toyota supplier companies in the region, is expected to have a $10 billion economic impact on the city over the next ten years. Further, continued federal regulatory approvals should contribute to increased heavy building materials consumption for the next several years from the next wave of large energy-sector projects. The Port Arthur liquefied natural gas (LNG) project, being developed by Sempra LNG, is anticipated to be a multi-billion-dollar nonresidential project that will enable shipments of natural gas to world markets.

Piedmont Atlantic

The Piedmont Atlantic megaregion generally follows the Interstate 85/20 corridor, spanning across North Carolina, South Carolina, Georgia, Tennessee and Alabama, and includes four primary cities: Raleigh, Charlotte, Atlanta and Birmingham. The Piedmont Atlantic is a fast-growing megaregion; however, it is facing challenges that accompany a growing population, including increased traffic congestion and inadequate infrastructure.

North Carolina continues to demonstrate strong employment and population trends, ranking in the top five states for job growth and population growth. North Carolina's population is estimated to grow by two million during the twenty-year period ending in 2040. In 2019, *Forbes* ranked Raleigh and Charlotte as the third and seventh best cities, respectively, for business and careers. The state continues to make significant investment in its infrastructure, with a fiscal year 2020 letting schedule of $5.2 billion. Additionally, since 2016, transportation referendums totaling nearly $1.5 billion have been approved by voters. Further, in November 2019, the state's governor signed Senate Bill 356 into law, authorizing the issuance of $400 million in Build NC Bonds for projects that do not qualify for federal funding, and the transfer of $64 million from the general reserve to the transportation emergency reserve for use in major disaster expenditures. The state's 2020-2029 Statewide Transportation Improvement Program, or STIP, reflects investment of approximately $23.7 billion for approximately 1,700 projects .

South Carolina ranked tenth in the nation for growth in single-housing permits for the twelve months ended December 31, 2019. The state's infrastructure program should be bolstered by S.1258, also known as Act No. 275, allowing up to $4.2 billion to be devoted to highway spending over a ten-year period. South Carolina's ten-year DOT plan includes 1,000 miles of upgrades to rural roads and improvements to 140 miles of interstate highways. To fund infrastructure needs, the state passed House Bill 3516 in June 2017, which increased the state's gas tax $0.02 per gallon per year for six years, the state's first gas tax increase in 30 years. The bill is expected to generate an additional $625 million per year when fully implemented. Additionally, in the November 2018 election, voters approved a sales tax increase to generate an additional $120 million for transportation funding. The nonresidential market should experience benefits from the South Carolina Port Authority's capital budget of $2.6 billion through 2022.

Georgia ranked among the top ten states for employment and population growth. For all U.S. metropolitan areas with populations greater than one million, Atlanta ranked 18th in employment gains for the ten-year period ended November 2019. Companies continue to relocate to or expand their operations within the state. In fact, according to the Georgia Department of Economic Development, the state is headquarters for 17 Fortune 500 companies. Recently, Lidl announced it will build a regional distribution center, investing $100 million, and Anheuser-Busch announced an $85 million operations expansion plan. In January 2016, a comprehensive ten-year infrastructure maintenance plan was announced and represents more than $10 billion in investment. Georgia's Major Mobility Investment Program, announced in 2017 and updated in 2019, will invest in 13 highway projects, investing $11 billion over a ten-year period. Additionally, in 2016 and 2018, Georgia voters approved six local sales tax increases to provide collectively $4.2 billion for road and transit projects, spanning a five- to 40-year period. The Transportation Special-Purpose Local-Option Sales Tax (T-SPLOST) program is starting to provide benefit in the southern part of Georgia.

Front Range

Through strategic acquisitions since 2011, the Company has built a leading position to serve the Front Range. Extending from the southern portion of Wyoming near Cheyenne, following Interstate 25 through Colorado into New Mexico, incorporating Santa Fe and Albuquerque, the Front Range megaregion is one of the nation's fastest-growing megaregions. Colorado ranked eighth in population growth for the eight-year period ended 2018. The Front Range represents 85% of Colorado's population and is estimated to exceed 10 million residents by 2050, nearly double the 2010 population.

The Colorado economy includes a diverse economic base, leading to strong employment and population growth. Denver was ranked fourth by *Forbes* for best cities for business and careers. Senate Bill 17-267, enacted in 2017, includes a component that focuses on new lease-purchase agreements that allocates $1.9 billion of its proceeds to Colorado DOT (CDOT) and the remainder of its proceeds to transportation and capital construction projects over a four-year period. CDOT fiscal year 2019-2020 budget is $3.6 billion.

Florida

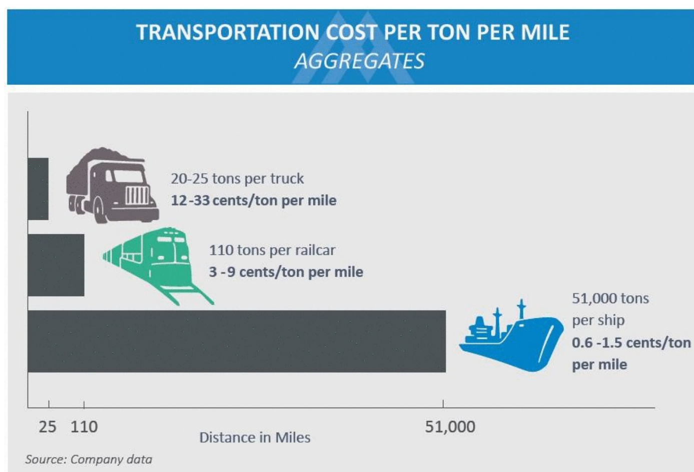
Spanning nearly the entire state, the Florida megaregion is rapidly expanding. Florida is the country's third-most populous state according to the Census Bureau. Population growth in Florida is estimated to exceed seven million, or 32%, from 2020 to 2040. Further, the state's GDP represents 5% of the nation's GDP. Florida ranks second in total housing permits for the twelve months ended December 31, 2019.

Florida has a $10.8 billion DOT budget for fiscal year 2019-2020 and a proposed budget of $9.9 billion for fiscal year 2020-2021. In fact, the state has a $46.6 billion five-year construction program that extends to 2021. In the 2018 elections, Florida voters approved six ballot initiatives totaling $24.9 billion for infrastructure investment.

Iowa

Iowa has been a top-five Martin Marietta revenue-generating state for decades and has historically experienced a stable and steady economy. Iowa is the nation's largest corn- and pork-producing state and provides approximately 9% of America's food supply. The Company's agricultural lime volumes are dependent on, among other things, weather, demand for agricultural commodities, including corn and soybeans, commodity prices, farm and land values. The Iowa economy has become consistently more diverse over the past several years, in part due to both its low cost and ease of doing business. The state is attractive for starting and expanding businesses due to enticing tax incentives. Facebook announced plans to begin work on a $400 million data center in the summer of 2020 which is projected to be completed in 2022. Additionally, Apple plans to build a $1.3 billion data center near Des Moines. Further, a $250 million warehouse and data center project is expected to add more than 1,000 jobs to the Des Moines metro. Wind-based energy production continues to be a focus for Iowa as the state remains focused on its efforts to become fossil fuel free.

Growth markets with limited supply of indigenous stone must be served via a long-haul distribution network.



The U.S. Department of the Interior's geological map of the United States depicts the possible sources of indigenous surface rock and illustrates its limited supply in certain areas of the United States, including the coastal areas from Virginia to Texas. Further, certain interior United States markets may experience limited availability of locally sourced aggregates resulting from increasingly restrictive zoning, permitting and/or environmental laws and regulations. The Company's long-haul distribution network is used to supplement, or in many cases wholly supply, the local crushed stone needs in these areas.

The long-haul distribution network can diversify market risk for locations that engage in long-haul transportation of aggregates products. Particularly where a producing quarry serves a local market and transports products via rail, water and/or truck to be sold in other markets, the risk of a downturn in one market may be somewhat mitigated by other markets served by the location.

Product shipments are moved by rail, water and truck through the Company's long-haul distribution network. The Company's rail network primarily serves its Texas, Florida, Colorado and Gulf Coast markets, while the Company's Bahamas and Nova Scotia locations transport materials via oceangoing ships. The Company's strategic focus includes expanding inland and offshore capacity and acquiring distribution yards and port locations to offload transported material. At December 31, 2019, the distribution network available to the Company consisted of 86 terminals.

The Company's increased dependence on rail shipments has made it more reliant on railroad performance issues, including track congestion, crew and availability, the effects of adverse weather conditions and the ability to negotiate favorable railroad shipping contracts. Further, changes in the operating strategy of rail transportation providers can create operational inefficiencies and increased costs from the Company's rail network.

A portion of railcars and all ships of the Company's long-haul distribution network are under short- and long-term leases, some with purchase options, and contracts of affreightment. The limited availability of water and rail transportation providers, coupled with limited distribution sites, can adversely affect lease rates for such services and ultimately the freight rate. The Company has not purchased ships.

The Company has long-term agreements providing dedicated shipping capacity from its Bahamas and Nova Scotia operations to its coastal ports. These contracts of affreightment are take-or-pay contracts with minimum and maximum shipping requirements. The minimum requirements were met in 2019. The Company's waterborne contracts of affreightment have varying expiration dates ranging from 2023 to 2027 and generally contain renewal options. However, there can be no assurance that such contracts can be renewed upon expiration or that terms will continue without significant increases.

The multiple transportation modes that have been developed with various rail carriers and deep-water ships provide the Company with the flexibility to effectively serve customers primarily in the Southwest and Southeast coastal markets.

Public Infrastructure, the Company's largest end-use market, is funded through a combination of federal, state and local sources.

Transportation investments generally boost the national economy by enhancing mobility and access and by creating jobs, which is a priority of many of the government's economic plans. Public-sector construction related to transportation infrastructure can be aggregates intensive and is funded through a combination of federal, state and local sources. The federal highway bill, currently the FAST Act, provides annual funding for public-sector highway construction projects and includes spending authorizations, which represent the maximum financial obligation that will result from the immediate or future outlays of federal funds for highway and transit programs. The federal government's surface transportation programs are financed mostly through the receipts of highway user taxes placed in the Highway Trust Fund, which is divided into the Highway Account and the Mass Transit Account. Revenues credited to the Highway Trust Fund are primarily derived from a federal gas tax, a federal tax on certain other motor fuels and interest on the accounts' accumulated balances. Of the currently imposed federal gas tax of $0.184 per gallon, which has been static since 1993, $0.15 is allocated to the Highway Account of the Highway Trust Fund.

Since most states are required to balance their budgets, reductions in revenues generally require a reduction in states' expenditures. However, the impact of state revenue reductions on highway investment will vary depending on whether the monies come from dedicated revenue sources, such as highway user fees, or whether portions are funded with general funds.

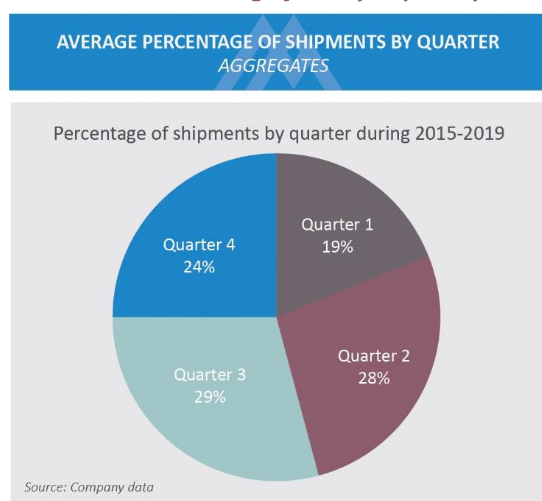
States continue to play an expanding role in infrastructure investment. In addition to federal appropriations, each state funds its infrastructure investment from specifically allocated amounts collected from various user fees, typically gasoline taxes and vehicle fees. Over the past several years, states have taken on a significantly larger role in funding infrastructure investment, including initiating special-purpose taxes and raising gas taxes. Management believes that financing at the state level, such as bond issuances, toll roads and tax initiatives, will grow at a faster rate in the near term than federal funding. State infrastructure investment generally leads to increased growth opportunities for the Company. The level of state public-works spending is varied across the nation and dependent upon individual state economies. The degree to which the Company could be affected by a reduction or slowdown in infrastructure spending varies by state. The state economies of the Building Materials business' ten largest revenue-generating states may disproportionately affect the Company's financial performance.

Governmental appropriations and expenditures are typically less interest rate-sensitive than private-sector spending. Obligations of federal funds are a leading indicator of highway construction activity in the United States. Before a state or local department of transportation can solicit bids on an eligible construction project, it enters into an agreement with the Federal Highway Administration to obligate the federal government to pay its portion of the project cost. Federal obligations are subject to annual funding appropriations by Congress.

The need for surface transportation improvements continues to significantly outpace the amount of available funding. A large number of roads, highways and bridges built following the establishment of the Interstate Highway System in 1956 are now in need of major repair or reconstruction. According to The Road Information Program (TRIP), a national transportation research group, vehicle travel on United States highways increased 17% from 2000 to 2017, while new lane road mileage increased only 5% over the same period. TRIP also reports that 44% of the nation's major roads are in poor or mediocre condition and 9% of the nation's bridges are structurally deficient. According to the 2015 American Association of State Highway and Transportation Officials' Transportation Bottom Line Report, annual investment in the nation's roads, highways and bridges needs to increase from $88 billion to $120 billion to improve conditions and meet the nation's mobility needs. While state DOTs and contractors are addressing their funding and labor constraints, the Company believes that with an enhanced infrastructure bill, those efforts would be more rapidly addressed. However, even in the absence of an enhanced infrastructure bill, strong customer confidence and improving sentiment leads management to believe that infrastructure activity for 2020 and beyond should benefit from the FAST Act and its eventual successor bill, the Tax Cuts and Jobs Act of 2017 (2017 Tax Act), and additional state and local infrastructure initiatives.

In addition to highways and bridges, transportation infrastructure includes aviation, mass transit, and ports and waterways. Railroad construction continues to benefit from economic growth, which ultimately generates a need for additional maintenance and improvements. According to the American Road & Transportation Builders Association, subway and light rail work is expected to benefit slightly from the FAST Act.

Erratic weather can significantly impact operations.



Production and shipment levels for the Building Materials business correlate with general construction activity, most of which occurs outdoors and, as a result, is affected by erratic weather, seasonal changes and other climate-related conditions which can significantly affect the business. Typically, due to a general slowdown in construction activity during winter months, the first and fourth quarters experience lower production and shipment activity. As such, temperature plays a significant role in the months of March and November, meaningfully affecting the Company's first- and fourth-quarter results, respectively, where warm and/or moderate temperatures in March and November allow the construction season to start earlier and end later, respectively.

Excessive rainfall jeopardizes production efficiencies, shipments and profitability in all markets served by the Company. In particular, the Company's operations in the southeastern and Gulf Coast regions of the United States and the Bahamas are at risk for hurricane activity, most notably in August, September and October. In 2019, Hurricane Dorian and Tropical Storm Imelda temporarily disrupted the Company's operations.

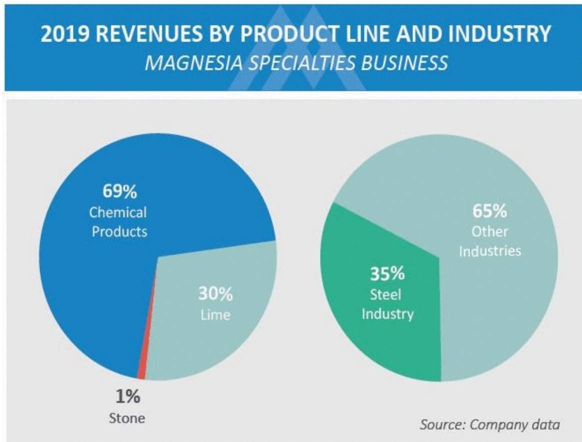
Capital investment decisions driven by capital intensity of the Building Materials business and focus on land.

The Company's organic capital program is designed to leverage construction market growth through investment in both permanent and portable facilities at the Company's operations. Over an economic cycle, the Company typically invests organic capital at an annual level that approximates depreciation expense. At mid-cycle and through cyclical peaks, organic capital investment typically exceeds depreciation expense, as the Company supports current capacity needs and invests for future capacity growth. Conversely, at a cyclical trough, the Company may reduce levels of capital investment. Regardless of

cycle, the Company sets a priority of investing capital to ensure safe, environmentally-sound and efficient operations, as well as to provide the highest quality of customer service and establish a foundation for future growth.

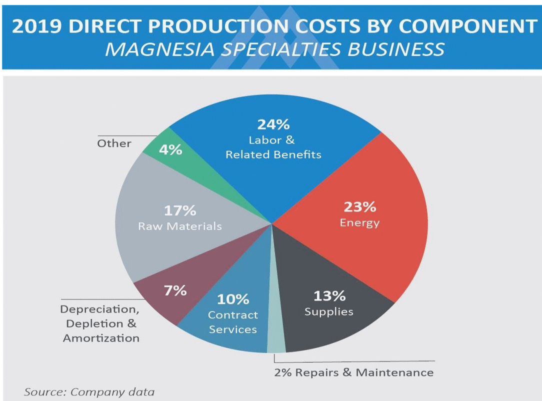
The Company is diligent in its focus on land opportunities, including potential new sites (greensites) and expanding locations. Land purchases are usually opportunistic and require the Company to be flexible in its ability to secure land. Land purchases can include contiguous property around existing quarry locations. Such property can serve as buffer property or additional mineral reserve capacity, assuming regulatory hurdles can be cleared and the underlying geology supports economical aggregates mining. In either instance, the acquisition of additional property around an existing quarry allows the expansion of the quarry footprint and an extension of quarry life.

Magnesia Specialties Business



The Magnesia Specialties business manufactures magnesia-based chemicals products for industrial, agricultural and environmental applications at its Manistee, Michigan facility. The Magnesia Specialties business produces and sells dolomitic lime from its Woodville, Ohio facility. Of 2019 total revenues, 69% were attributable to chemicals products, 30% were attributable to lime and 1% was attributable to stone.

In 2019, 81% of the lime produced was sold to third-party customers, while the remaining 19% was used internally as a raw material for the business' manufacturing of chemicals products. Dolomitic lime products sold to external customers are primarily used by the steel industry, and overall, 35% of Magnesia Specialties' 2019 total revenues related to products used in the steel industry. Accordingly, a portion of the segment's revenues and profits is affected by production and inventory trends within the steel industry, which are guided by the rate of consumer consumption, the flow of offshore imports and other economic factors. Steel production in 2019 increased 1.8% compared with 2018. The dolomitic lime business runs most profitably at 70% or greater steel capacity utilization; domestic capacity utilization averaged 80% in 2019. The chemical products business focuses on higher-margin specialty chemicals that can be produced at volumes that support efficient operations.



Total revenues of the Magnesia Specialties business in 2019 were predominantly derived from domestic customers, and no single foreign country accounted for 10% or more of the total revenues for the Company. Financial results can be affected by foreign currency exchange rates, increasing transportation costs or weak economic conditions in foreign markets. To mitigate the short-term effect of currency exchange rates, foreign transactions are denominated in United States dollars. However, the current strength of the United States dollar in foreign markets is affecting the overall price of Magnesia Specialties' products when compared to foreign-domiciled competitors.

A significant portion of the Magnesia Specialties business' costs is of a fixed or semi-fixed nature. The production process requires the use of natural gas, coal and petroleum coke. Therefore, fluctuations in their pricing directly affect operating results. To help mitigate this risk, the Company has fixed-price agreements for approximately 62% of its 2020 energy needs for coal, natural gas and petroleum coke. For 2019, the segment's average cost per MCF (thousand cubic feet) of natural gas decreased 4.7% versus 2018. Given high fixed costs, low capacity utilization can negatively affect the segment's results of operations.

Management expects future organic profitability growth to result from increased pricing, rationalization of the current product portfolio and/or further cost reductions.

The Magnesia Specialties business is highly dependent on rail transportation, particularly for movement of dolomitic lime from Woodville to Manistee and direct customer shipments of dolomitic lime and magnesia chemicals products from both Woodville and Manistee. The segment can be affected by the risks mentioned in the long-haul distribution discussion in the *Building Materials Business' Key Considerations* section.

Environmental Regulation and Litigation

The expansion and growth of the aggregates industry is subject to increasing challenges from environmental and political advocates aiming to control the pace and direction of future development. Certain environmental groups have published lists of targeted municipal areas, including areas within the Company's marketplace, for environmental and suburban growth control. The effect of these initiatives on the Company's growth is typically localized. Further challenges are expected as the momentum of these initiatives ebb and flow across the United States. Rail and other transportation alternatives are being heralded by these special-interest groups as solutions to mitigate road traffic congestion and overcrowding.

The Company's operations are subject to and affected by federal, state and local laws and regulations relating to the environment, health and safety and other regulatory matters. Certain of the Company's operations may occasionally use substances classified as toxic or hazardous. The Company regularly monitors and reviews its operations, procedures and policies for compliance with these laws and regulations. Despite these compliance efforts, risk of environmental liability is inherent in the operation of the Company's businesses, as it is with other companies engaged in similar businesses.

Environmental operating permits are, or may be, required for certain of the Company's operations; such permits are subject to modification, renewal and revocation. New permits are generally required for opening new sites or for expansion at existing operations and can take several years to obtain. In the area of land use, rezoning and special or conditional use permits are increasingly difficult to obtain. Once a permit is issued, the location is required to generally operate in accordance with the approved site plan.

As is the case with others in the cement industry, the Company's two cement operations produce varying quantities of cement kiln dust (CKD). This by-product consists of fine-grained, solid, highly alkaline material removed from cement kiln exhaust gas by air pollution control devices. Because much of the CKD is actually unreacted raw materials, it is generally permissible to recycle the CKD back into the production process, and large amounts are often treated in such manner. CKD that is not returned to the production process is disposed in landfills. CKD is currently exempted from federal hazardous waste regulations under Subtitle C of the Resource Conservation and Recovery Act.

The Clean Air Act, originally passed in 1963 and periodically updated by amendments, is the United States' national air pollution control program that granted the Environmental Protection Agency (EPA) authority to set limits on the level of various air pollutants. To be in compliance with National Ambient Air Quality Standards, a defined geographic area must be below established limits for six pollutants. Environmental groups have been successful in lawsuits against the federal and certain state departments of transportation, delaying highway construction in municipal areas not in compliance with the Clean Air Act. The EPA designates geographic areas as nonattainment areas when the level of air pollutants exceeds the national standard. Nonattainment areas receive deadlines to reduce air pollutants by instituting various control strategies or otherwise face fines or control by the EPA. Included as nonattainment areas are several major metropolitan areas in the Company's markets, such as Houston/Brazoria/Galveston, Texas; Dallas/Fort Worth, Texas; Denver, Colorado; Boulder, Colorado; Fort Collins/Greeley/Loveland, Colorado; Council Bluffs, Iowa; Atlanta, Georgia; Indianapolis, Indiana; and Baltimore, Maryland. Federal transportation funding has been directly tied to compliance with the Clean Air Act.

Large emitters (facilities that emit 25,000 metric tons or more per year) of greenhouse gases (GHG) must report GHG generation to comply with the EPA's Mandatory Greenhouse Gases Reporting Rule (GHG Rule). The Company files annual reports in accordance with the GHG Rule relating to operations at its Magnesia Specialties facilities in Woodville, Ohio, and Manistee, Michigan, as well as the two cement plants in Texas, each of which emit certain GHG, including carbon dioxide, methane and nitrous oxide. If Congress passes legislation on GHG, these operations will likely be subject to the new program. Under President Trump's administration, it is unknown whether the EPA is likely to impose additional regulatory restrictions on emissions of GHG. However, the Company believes that any increased operating costs or taxes related to GHG emission limitations at its Woodville or cement operations would be passed on to its customers. The Manistee facility may have to absorb extra costs due to the regulation of GHG emissions in order to maintain competitive pricing in its markets. The Company cannot reasonably predict how much those increased costs may be.

The Company is engaged in certain legal and administrative proceedings incidental to its normal business activities. In the opinion of management, based upon currently available facts, the likelihood is remote that the ultimate outcome of any litigation or other proceedings, including those pertaining to environmental matters, relating to the Company and its subsidiaries, will have a material adverse effect on the overall results of the Company's operations, cash flows or financial position.

FINANCIAL OVERVIEW

2019 marked record total revenues, gross profit, earnings from operations and Adjusted EBITDA (defined below) for the Company. Strong underlying demand led to shipment growth in the majority of product lines in the Building Materials business, resulting in a 210-basis-point increase in consolidated gross margin. The Magnesia Specialties business performed well despite the impact of several customers rationalizing their inventory levels, which resulted in a short-term headwind. The Company continues to effectively control costs, as evidenced by the 20-basis-point decline for selling, general and administrative expenses as a percentage of total revenues.

Results of Operations

The discussion and analysis that follow reflect management's assessment of the financial condition and results of operations (MD&A) of the Company and should be read in conjunction with the audited consolidated financial statements. As discussed in more detail, the Company's operating results are highly dependent upon activity within the construction marketplace, economic cycles within the public and private business sectors and seasonal and other weather-related conditions. Accordingly, financial results for any year presented, or year-to-year comparisons of reported results, may not be indicative of future operating results. As permitted by the Securities and Exchange Commission (SEC) under the FAST Act Modernization and Simplification of Regulation S-K, the Company has elected to omit the discussion of the earliest period (2017) presented as it WAS included in its MD&A in its 2018 Form 10-K filed on February 25, 2019, incorporated by reference from Exhibit 13.01 thereto.

The Company's Building Materials business generated the majority of consolidated total revenues and earnings from operations. The following comparative analysis and discussion should be read within this context. Further, sensitivity analysis and certain other data are provided to enhance the reader's understanding of MD&A and are not intended to be indicative of management's judgment of materiality.

The Company's two cold mix asphalt plants have been reclassified from the asphalt and paving product line to the aggregates product line. These operations did not represent a material amount of product revenues and gross profit. 2018 information has been reclassified to conform to the presentation of the Company's current reportable product lines.

The Company's consolidated operating results and operating results as a percentage of total revenues are as follows:

years ended December 31 (in millions, except for % of total revenues)	2019	% of Total revenues	2018	% of Total revenues
Product and services revenues	$ 4,422.3		$ 3,980.4	
Freight revenues	316.8		263.9	
Total revenues	**4,739.1**	**100.0**	**4,244.3**	**100.0**
Cost of revenues - products and services	3,239.1		3,009.8	
Cost of revenues - freight	321.0		267.9	
Total cost of revenues	3,560.1	75.1	3,277.7	77.2
Gross profit	**1,179.0**	**24.9**	**966.6**	**22.8**
Selling, general and administrative expenses	302.7	6.4	280.6	6.6
Acquisition related expenses, net	0.5		13.5	
Other operating income, net	(9.1)		(18.2)	
Earnings from operations	**884.9**	**18.7**	**690.7**	**16.3**
Interest expense	129.3		137.1	
Other nonoperating expenses and (income), net	7.3		(22.5)	
Earnings before income tax expense	748.3		576.1	
Income tax expense	136.3		105.7	
Consolidated net earnings	612.0	12.9	470.4	11.1
Less: Net earnings attributable to noncontrolling interests	0.1		0.4	
Net Earnings Attributable to Martin Marietta	**$ 611.9**	**12.9**	**$ 470.0**	**11.1**

Earnings before interest; income taxes; depreciation, depletion and amortization; the noncash earnings/loss from nonconsolidated equity affiliates; the impact of Bluegrass acquisition-related expenses, net; the impact of selling acquired inventory due to the markup to fair value as part of acquisition accounting; and the asset and portfolio rationalization charge (Adjusted EBITDA) is an indicator used by the Company and investors to evaluate the Company's operating performance from period to period. Adjusted EBITDA is not defined by generally accepted accounting principles and, as such, should not be construed as an alternative to net earnings, earnings from operations or operating cash flow. However, the Company's management believes that Adjusted EBITDA may provide additional information with respect to the Company's performance. Because Adjusted EBITDA excludes some, but not all, items that affect net earnings and may vary among companies, Adjusted EBITDA as presented by the Company may not be comparable to similarly titled measures of other companies.

The following table presents a reconciliation of net earnings attributable to Martin Marietta to consolidated Adjusted EBITDA:

Consolidated Adjusted EBITDA

years ended December 31 (in millions)	2019	2018
Net earnings attributable to Martin Marietta	**$ 611.9**	$ 470.0
Add back:		
Interest expense	**128.9**	137.1
Income tax expense for controlling interests	**136.3**	105.6
Depreciation, depletion and amortization expense and earnings/loss from nonconsolidated equity affiliates	**377.4**	328.4
Bluegrass acquisition-related expenses, net	**—**	13.5
Impact of selling acquired inventory due to the markup to fair value as part of acquisition accounting	**—**	18.7
Asset and portfolio rationalization charge	**—**	18.8
Consolidated Adjusted EBITDA	**$ 1,254.5**	$ 1,092.1

Total Revenues

Total revenues by reportable segment are as follows:

years ended December 31 (in millions)	2019	2018
Building Materials Business:		
Mid-America Group	**$ 1,446.0**	$ 1,223.2
Southeast Group	**506.4**	423.4
West Group	**2,515.4**	2,310.0
Total Building Materials Business	**4,467.8**	3,956.6
Magnesia Specialties	**271.3**	287.7
Total Consolidated Revenues	**$ 4,739.1**	$ 4,244.3

Total revenues by product line are as follows:

years ended December 31 (in millions)	2019	2018
Building Materials Business:		
Aggregates	**$ 3,034.8**	$ 2,593.4
Cement	**455.5**	404.1
Ready Mixed Concrete	**948.9**	964.8
Asphalt and Paving Services	**294.1**	258.5
Less: Interproduct revenues	**(265.5)**	(264.2)
Total Building Materials Business	**4,467.8**	3,956.6
Magnesia Specialties	**271.3**	287.7
Total Consolidated Revenues	**$ 4,739.1**	$ 4,244.3

Products and Services Revenues

Products and services revenues by reportable segment are as follows:

years ended December 31 (in millions)	2019	2018
Building Materials Business:		
Mid-America Group	**$ 1,328.8**	$ 1,133.8
Southeast Group	**489.1**	409.6
West Group	**2,354.5**	2,168.4
Total Building Materials Business	**4,172.4**	3,711.8
Magnesia Specialties	**249.9**	268.6
Total Consolidated Products and Services Revenues	**$ 4,422.3**	$ 3,980.4

Products and services revenues by product line for the Company are as follows:

years ended December 31 (in millions)	2019	2018
Building Materials Business:		
Aggregates	**$ 2,756.7**	$ 2,365.8
Cement	**439.1**	387.8
Ready Mixed Concrete	**948.1**	963.8
Asphalt and Paving Services	**294.0**	258.6
Less: Interproduct revenues	**(265.5)**	(264.2)
Total Building Materials Business	**4,172.4**	3,711.8
Magnesia Specialties	**249.9**	268.6
Total Consolidated Products and Services Revenues	**$ 4,422.3**	$ 3,980.4

Aggregates. The average selling price per ton for aggregates was $14.33 and $13.75 for 2019 and 2018, respectively.

Aggregates average selling price increases compared to the prior year are as follows:

years ended December 31	2019	2018
Mid-America Group	**1.7%**	0.8%
Southeast Group	**4.8%**	1.2%
West Group	**7.1%**	2.0%
Total Aggregates Operations[1]	**4.2%**	1.8%

[1] *Total aggregates operations include acquisitions from the date of acquisition and divestitures through the date of disposal.*

Pricing growth in 2019 is in line with the Company's historical long-term annual growth rate.

The following presents aggregates shipments for each reportable segment of the Building Materials business:

years ended December 31 Tons (in millions)	2019	2018
Mid-America Group	**95.6**	83.0
Southeast Group	**27.0**	23.7
West Group	**68.5**	64.4
Total Aggregates Operations[1]	**191.1**	171.1

[1] *Total aggregates operations include acquisitions from the date of acquisition and divestitures through the date of disposal.*

Aggregates shipments sold to external customers and internal tons used in other product lines are as follows:

years ended December 31 Tons (in millions)	2019	2018
Tons to external customers	**181.1**	160.5
Internal tons used in other product lines	**10.0**	10.6
Aggregates Tons	**191.1**	171.1

Aggregates volume variance compared to the prior year by reportable segment is as follows:

years ended December 31	2019	2018
Mid-America Group	**15.2%**	14.5%
Southeast Group	**13.9%**	16.1%
West Group	**6.5%**	(1.0%)
Total Aggregates Operations[1]	**11.7%**	8.3%

[1] *Total aggregates operations include acquisitions from the date of acquisition and divestitures through the date of disposal.*

Aggregates volume strength in 2019 reflects strong underlying demand in all three end-use markets, and carryover weather-deferred projects from 2018. Additionally, the Mid-America Group and the Southeast Group benefitted from a full year of shipments from the Bluegrass operations acquired in April 2018.

Cement, Ready Mixed Concrete, Asphalt and Paving Services. The Company's cement and downstream operations, namely ready mixed concrete, asphalt and paving services, are located in the West Group.

Average selling prices for cement, ready mixed concrete and asphalt are as follows:

years ended December 31		2019		2018
Cement – per ton	**$**	**112.75**	$	109.38
Ready Mixed Concrete – per cubic yard	**$**	**109.07**	$	108.83
Asphalt – per ton	**$**	**46.75**	$	45.14

Unit shipments for cement, ready mixed concrete and asphalt are as follows:

years ended December 31 (in millions)	**2019**	2018
Cement:		
Tons to external customers	**2.7**	2.3
Internal tons used in ready mixed concrete	**1.2**	1.2
Total cement tons	**3.9**	3.5
Ready Mixed Concrete – cubic yards	**8.5**	8.7
Asphalt:		
Tons to external customers	**0.9**	0.8
Internal tons used in paving operations	**2.0**	1.9
Total asphalt tons	**2.9**	2.7

2019 shipments in each of the product lines reflect healthy demand, with cement shipments reaching a new annual record.

Magnesia Specialties. In 2019, Magnesia Specialties reported total revenues of $271.3 million, gross profit of $95.4 million and earnings from operations of $83.6 million, representing decreases of 5.7%, 3.3% and 5.1%, respectively, compared with 2018. These declines are attributable to slowing lime shipments to domestic steel customers and ongoing inventory rationalization by international customers.

Cost of Revenues – Products and Services

Cost of revenues – products and services increased 8.6% in 2019 compared with 2018 due to increased revenues of 11.7%. The cost of revenues percentage increase was lower than the percentage increase in total revenues, as the Building Materials business experienced higher operating leverage of fixed production costs.

Cost of revenues – products and services also includes internal freight costs incurred when the Company transports building material products, either by truck, rail or water, from one location to another. These freight costs, included in consolidated cost of revenues – products and services, were $325.2 million and $273.2 million for 2019 and 2018, respectively.

Gross Profit

Gross profit (loss) is as follows:

years ended December 31 (in millions)	**2019**	2018
Building Materials Business:		
Mid-America Group	**$ 482.2**	$ 366.8
Southeast Group	**125.3**	78.0
West Group	**473.3**	415.3
Products and Services	**1,080.8**	860.1
Freight	**(0.2)**	0.2
Building Materials Business	**1,080.6**	860.3
Magnesia Specialties:		
Products and Services	**99.4**	102.9
Freight	**(4.0)**	(4.2)
Magnesia Specialties	**95.4**	98.7
Corporate	**3.0**	7.6
Total Consolidated Gross Profit	**$ 1,179.0**	$ 966.6

Products and services gross margin by reportable segment and total products and services consolidated gross margin are as follows:

years ended December 31	**2019**	2018
Mid-America Group	**36.3%**	32.3%
Southeast Group	**25.6%**	19.0%
West Group	**20.1%**	19.2%
Total Building Materials Business	**25.9%**	23.2%
Magnesia Specialties	**39.8%**	38.3%
Total Consolidated	**26.7%**	24.2%

Gross profit (loss) by product line is as follows:

years ended December 31 (in millions)	**2019**	2018
Building Materials Business:		
Aggregates	**$ 807.9**	$ 608.4
Cement	**143.4**	126.2
Ready Mixed Concrete	**78.8**	74.2
Asphalt and Paving Services	**50.7**	51.3
Products and Services	**1,080.8**	860.1
Freight	**(0.2)**	0.2
Building Materials Business	**1,080.6**	860.3
Magnesia Specialties:		
Products and Services	**99.4**	102.9
Freight	**(4.0)**	(4.2)
Magnesia Specialties	**95.4**	98.7
Corporate	**3.0**	7.6
Total Consolidated Gross Profit	**$ 1,179.0**	$ 966.6

Products and services gross margin by product line and total products and services consolidated gross margin are as follows:

years ended December 31	**2019**	2018
Aggregates	**29.3%**	25.7%
Cement	**32.7%**	32.5%
Ready Mixed Concrete	**8.3%**	7.7%
Asphalt and Paving	**17.2%**	19.8%
Total Building Materials Business	**25.9%**	23.2%
Magnesia Specialties	**39.8%**	38.3%
Total Consolidated	**26.7%**	24.2%

The following presents a rollforward of the Company's consolidated gross profit:

years ended December 31 (in millions)	**2019**	2018
Consolidated gross profit, prior year	**$ 966.6**	$ 971.9
Aggregates:		
Pricing	**111.5**	89.7
Volume	**139.3**	41.9
Operational performance[1]	**(51.3)**	(125.5)
Change in aggregates gross profit	**199.5**	6.1
Cement and downstream operations products and services	**21.1**	(19.0)
Magnesia Specialties products	**(3.4)**	8.8
Corporate	**(4.6)**	0.7
Freight	**(0.2)**	(1.9)
Change in consolidated gross profit	**212.4**	(5.3)
Consolidated gross profit, current year	**$ 1,179.0**	$ 966.6

[1] Inclusive of cost increases/decreases, product and geographic mix and other operating impacts

The increase in gross profit in 2019 compared with 2018 is primarily attributable to increased total revenues in the Building Materials business, supported by strong underlying demand and pricing improvements, coupled with higher operating leverage of fixed production costs, and the impact of reduced costs resulting from restructuring actions in 2018. Additionally, 2018 cost of revenues included the $18.7 million impact of selling acquired aggregates product line inventory after its markup to fair value as part of acquisition accounting. The decline in gross profit in Magnesia Specialties is driven by lower sales due to slowing lime shipments to domestic steel customers and ongoing inventory rationalization by international customers, partially offset by cost reduction actions.

Corporate gross profit includes intercompany royalty and rental revenue and expenses, depreciation on capitalized interest and unallocated operational expenses excluded from the Company's evaluation of business segment performance.

Selling, General and Administrative Expenses

SG&A expenses for 2019 and 2018 were 6.4% and 6.6% of total revenues, respectively. The $22.1 million increase in total expense is driven by higher salaries, benefits and share-based compensation costs.

Acquisition-Related Expenses, Net

The Company incurs business development and acquisition integration costs in connection with its strategic growth plan, and at times may recognize nonrecurring transaction costs related to the acquisition (collectively "acquisition-related expenses, net"). In 2019 and 2018, acquisition-related expenses, net, were $0.5 million and $13.5 million, respectively. These expenses were primarily related to the Bluegrass acquisition in 2018. As part of the agreement with the U.S. Department of Justice (DOJ), the Company divested a legacy Martin Marietta operation and a legacy Bluegrass operation. With the divestiture of the legacy Martin Marietta operation, a pretax gain of $14.8 million was recognized and is included in acquisition-related expenses, net, in the consolidated statements of earnings and comprehensive earnings for the year ended December 31, 2018. There was no gain or loss on the divestiture of the legacy Bluegrass operation.

Other Operating Income, Net

Other operating income, net, is comprised generally of gains and losses on the sale of assets; recoveries and losses related to certain customer accounts receivable; rental, royalty and services income; accretion expense, depreciation expense and gains and losses related to asset retirement obligations. These net amounts represented income of $9.1 million in 2019 and $18.2 million in 2018. 2019 income includes the reversal of $6.9 million of accruals for sales tax and unclaimed property contingencies. 2018 income reflects a $7.7 million net gain on legal settlements and $25.3 million gain on the sale of assets, primarily excess land, partially offset by an asset and portfolio rationalization charge of $18.8 million. The asset and portfolio rationalization charge relates to the Company's Southwest ready mixed concrete operations, reported in the West Group reportable segment, and reflects the Company's evaluation of the recoverability of certain long-lived assets, including property, plant and equipment and intangible assets, for underperforming operations in this business and a reduction in headcount. Of the total charge, $17.0 million was noncash and $1.8 million was settled in cash.

Earnings from Operations

Consolidated earnings from operations were $884.9 million and $690.7 million in 2019 and 2018, respectively.

Interest Expense

Interest expense was $129.3 million in 2019 and $137.1 million in 2018. The decline in 2019 reflects lower outstanding debt, as the Company made net debt repayments of $350.1 million.

Other Nonoperating (Income) and Expenses, Net

Other nonoperating income and expenses, net, is comprised generally of interest income; foreign currency transaction gains and losses; pension and postretirement benefit cost, excluding service cost; net equity earnings from nonconsolidated investments and other miscellaneous income and expenses. Consolidated other nonoperating income and expenses, net, was expense of $7.3 million in 2019, and income of $22.5 million in 2018. 2019 expense includes the correction of a prior-period error that overstated equity earnings from a nonconsolidated affiliate. The error was not deemed material to any previously-reported period and was corrected as an out-of-period expense of $15.7 million ($12.0 million, net of tax). The pretax

noncash adjustment is recorded in other nonoperating expenses, net, consistent with the recurring classification of equity earnings from the affiliate.

Income Tax Expense

Variances in the estimated effective income tax rates, when compared with the statutory corporate income tax rate, are due primarily to the statutory depletion deduction for mineral reserves, the effect of state income taxes, stock compensation deductions, and the impact of foreign income or losses for which no tax expense or benefit is recognized. Additionally, certain acquisition-related expenses, net, have limited deductibility for income tax purposes.

The permanent benefit associated with the statutory depletion deduction for mineral reserves is typically the significant driver of the estimated effective income tax rate. The statutory depletion deduction is calculated as a percentage of revenues subject to certain limitations. Due to these limitations, changes in sales volumes and pretax earnings may not proportionately affect the statutory depletion deduction and the corresponding impact on the effective income tax rate. However, the impact of the depletion deduction on the estimated effective tax rate is inversely affected by increases or decreases in pretax earnings.

The Company's estimated effective income tax rate for the years ended December 31, 2019 and 2018 was 18.2% and 18.3%, respectively.

The 2019 income tax rate reflects a discrete income tax benefit of $15.2 million related to a change in tax election for an acquired entity. The 2018 income tax rate includes a net tax benefit of $18.9 million for the final true-up of the impact of the 2017 Tax Act.

Net Earnings Attributable to Martin Marietta and Earnings Per Diluted Share

Net earnings attributable to Martin Marietta were $611.9 million, or $9.74 per diluted share, for 2019 and $470.0 million, or $7.43 per diluted share, for 2018.

Liquidity and Cash Flows

Operating Activities

Generally, the Company's primary source of liquidity is cash generated from operating activities. Operating cash flow is substantially derived from consolidated net earnings, before deducting depreciation, depletion and amortization, and offset by working capital requirements. Cash provided by operations was $966.1 million in 2019 and $705.1 million in 2018. The increase in cash provided by operations in 2019 compared with 2018 reflects higher earnings and lower contributions to the Company's pension plans. Cash provided by operations in 2018 reflects $162.3 million of contributions to the Company's pension plans, the majority of which is attributable to the 2017 plan year. As a result, the Company recognized a higher cash tax benefit at the 35% federal tax rate in effect for the plan year. For comparative purposes, the Company made pension plan contributions of $58.9 million in 2019.

Depreciation, depletion and amortization expense were as follows:

years ended December 31 (in millions)	**2019**	2018
Depreciation	**$ 313.6**	$ 296.8
Depletion	**37.5**	29.3
Amortization	**16.4**	17.9
Total	**$ 367.5**	$ 344.0

The increase in 2019 reflects a full year of the legacy Bluegrass operations versus the period from acquisition on April 28 to December 31 in 2018.

Investing Activities

Net cash used for investing activities was $385.9 million in 2019 and $1.95 billion in 2018.
Property, plant and equipment capitalized by reportable segment, excluding acquisitions, was as follows:

years ended December 31 (in millions)	**2019**	2018
Mid-America Group	**$ 127.7**	$ 176.8
Southeast Group	**45.3**	41.6
West Group	**182.5**	145.6
Total Building Materials Business	**355.5**	364.0
Magnesia Specialties	**20.0**	12.5
Corporate	**12.1**	4.8
Total	**$ 387.6**	$ 381.3

Spending in 2019 and 2018 for the Mid-America Group reflects the ongoing new underground mine project at the Fort Calhoun operation in Nebraska, which is expected to be completed and fully operational in 2022. The increase in spending in the West Group for 2019 primarily reflects the secondary plant construction at the Company's Granite Canyon quarry in Wyoming. Magnesia Specialties capital spending in 2019 is primarily attributable to a kiln project at the Woodville, Ohio, facility.

The Company paid cash of $1.64 billion for acquisitions in 2018, primarily for the purchase of Bluegrass. There were no acquisitions in 2019.

Pretax proceeds from divestitures and sales of surplus land and equipment were $8.4 million in 2019 and $69.1 million in 2018. In 2018, the amount includes the divestitures of the heritage Martin Marietta Forsyth Quarry and the legacy Bluegrass Beaver Creek Quarry as part of an agreement with the U.S. DOJ, approved by the federal district court for the District of Columbia, which resolved all competition issues with respect to the Bluegrass acquisition.

Financing Activities

The Company used $604.1 million and $158.4 million of cash for financing activities during 2019 and 2018, respectively.

Net repayments of long-term debt were $350.1 million in 2019 and net borrowings of long-term debt were $89.9 million in 2018. The Company repaid the $300 million aggregate principal amount of Floating Rate Senior Notes due 2019 on its maturity date.

The Company repurchased 0.4 million shares of its common stock for a total cost of $98.2 million, or $236.04 per share, in 2019 and 0.5 million shares of its common stock for a total cost of $100.4 million, or $192.61 per share, in 2018.

For the years ended December 31, 2019 and 2018, the Board of Directors approved total cash dividends on the Company's common stock of $2.06 per share and $1.84 per share, respectively. Total cash dividends were $129.8 million in 2019 and $116.4 million in 2018.

Cash provided by issuances of common stock, which represents the exercises of stock options, excluding the impact of shares withheld for taxes, was $13.7 million and $7.3 million in 2019 and 2018, respectively.

Capital Structure and Resources

Long-term debt, including current maturities, was $2.77 billion at December 31, 2019, and was principally in the form of publicly-issued long-term notes and debentures.

The Company, through a wholly-owned special-purpose subsidiary, has a $400.0 million trade receivable securitization facility (the "Trade Receivable Facility"). In September 2019, the Company extended the maturity of the Trade Receivable Facility to September 23, 2020. The Trade Receivable Facility is backed by eligible trade receivables, as defined. Borrowings are limited to the lesser of the facility limit or the borrowing base, as defined. These receivables are originated by the Company and then sold to the wholly-owned special-purpose subsidiary. The Company continues to be responsible for the servicing and administration of the receivables purchased by the wholly-owned special-purpose subsidiary. The Trade Receivable Facility contains a cross-default provision to the Company's other debt agreements.

The $700.0 million five-year senior unsecured revolving facility (the "Revolving Facility"), which matures in December 2024, requires the Company's ratio of consolidated debt-to-consolidated EBITDA, as defined, for the trailing twelve month period (the "Ratio") to not exceed 3.50x as of the end of any fiscal quarter, provided that the Company may exclude from the Ratio debt incurred in connection with certain acquisitions during the quarter or the three preceding quarters so long as the Ratio calculated without such exclusion does not exceed 3.75x. Additionally, if there are no amounts outstanding under the Revolving Facility and the Trade Receivable Facility, consolidated debt, including debt for which the Company is a co-borrower, may be reduced by the Company's unrestricted cash and cash equivalents in excess of $50.0 million, such reduction not to exceed $200.0 million, for purposes of the covenant calculation.

At December 31, 2019, the Company's ratio of consolidated debt-to-consolidated EBITDA, as defined in the agreement governing the Revolving Facility (the "Credit Agreement"), for the trailing twelve month EBITDA was 2.16 times and was calculated as follows:

(dollars in millions)	Twelve-Month Period January 1, 2019 to December 31, 2019
Net earnings attributable to Martin Marietta	$ 611.9
Add back:	
Interest expense	129.3
Income tax expense	136.3
Depreciation, depletion and amortization expense and nonconsolidated equity affiliate adjustment	383.4
Stock-based compensation expense	34.1
Deduct:	
Interest income	(0.4)
Consolidated EBITDA, as defined by the Company's Credit Agreement	$ 1,294.6
Consolidated debt, as defined and including debt for which the Company is a co-borrower, at December 31, 2019	$ 2,793.8
Consolidated debt-to-consolidated EBITDA, as defined by the Company's Credit Agreement, at December 31, 2019 for trailing twelve month EBITDA	2.16x

Total equity was $5.35 billion at December 31, 2019. At that date, the Company had an accumulated other comprehensive loss of $145.8 million, primarily resulting from unrecognized actuarial losses related to pension benefits.

Pursuant to authority granted by its Board of Directors, the Company can repurchase up to 20 million shares of common stock. As of December 31, 2019, the Company had 13.7 million shares remaining under the repurchase authorization. The Company expects to allocate capital for additional share repurchases based on available excess free cash flow, defined as operating cash flow less capital expenditures and dividends, subject to a leverage target (consolidated debt-to-consolidated EBITDA) of 2.0 times to 2.5 times and with consideration of other capital needs. Future repurchases are expected to be carried out through a variety of methods, which may include open market purchases, privately negotiated transactions, block trades, accelerated share purchase transactions or any combination of such methods. Share repurchases will be executed

based on then-current business and market factors so the actual return of capital in any single quarter may vary. The repurchase program may be modified, suspended or discontinued by the Board of Directors at any time without prior notice.

At December 31, 2019, the Company had $21.0 million in cash and short-term investments that are considered cash equivalents. The Company manages its cash and cash equivalents to ensure short-term operating cash needs are met and excess funds are managed efficiently. The Company subsidizes shortages in operating cash through credit facilities. The Company utilizes excess cash to either pay-down credit facility borrowings or invest in money market funds, money market demand deposit accounts or offshore time deposit accounts. Money market demand deposits and offshore time deposit accounts are exposed to bank solvency risk. Money market demand deposit accounts are FDIC insured up to $250,000. The Company's investments in bank funds generally exceed the $250,000 FDIC insurance limit.

Cash on hand, along with the Company's projected internal cash flows and availability of financing resources, including its access to debt and equity capital markets, is expected to continue to be sufficient to provide the capital resources necessary to support anticipated operating needs, cover debt service requirements, meet capital expenditures and discretionary investment needs, fund certain acquisition opportunities that may arise and allow for payment of dividends for the foreseeable future. Borrowings under the Revolving Facility are unsecured and may be used for general corporate purposes. The Company's ability to borrow or issue securities is dependent upon, among other things, prevailing economic, financial and market conditions. At December 31, 2019, the Company had $757.7 million of unused borrowing capacity under its Revolving Facility and Trade Receivable Facility.

The Company may be required to obtain additional financing in order to fund certain strategic acquisitions or to refinance outstanding debt. Any strategic acquisition of size would likely require an appropriate balance of newly-issued equity with debt in order to maintain a composite investment-grade credit rating. Furthermore, the Company is exposed to credit markets through the interest cost related to its variable-rate debt, which includes the Floating Rate Senior Notes due in 2020 and borrowings under its Revolving Facility and Trade Receivable Facility.

Contractual and Off Balance Sheet Obligations

Postretirement medical benefits will be paid from the Company's assets. The obligation, if any, for retiree medical payments is subject to the terms of the plan. At December 31, 2019, the Company's recorded benefit obligation related to these benefits totaled $13.0 million.

The Company has other retirement benefits related to pension plans. At December 31, 2019, the qualified pension plans were underfunded by $3.4 million. The Company estimates that it will make contributions of $50.0 million to qualified pension plans in 2020. Any contributions beyond 2020 are currently undeterminable and will depend on the investment return on the related pension assets. However, management's practice is to fund at least the service cost annually. At December 31, 2019, the Company had a total obligation of $106.4 million related to unfunded nonqualified pension plans and expects to make contributions of $10.2 million to these plans in 2020.

At December 31, 2019, the Company had $27.2 million accrued for uncertain tax positions, including interest and correlative effects of $1.7 million. Such liabilities may become payable if the tax positions are not sustained upon examination by a taxing authority.

In connection with normal, ongoing operations, the Company enters into market-rate leases for property, plant and equipment and royalty commitments principally associated with leased land and mineral reserves. Additionally, the Company enters into equipment rentals to meet shorter-term, nonrecurring and intermittent needs. Effective January 1, 2019, the Company adopted *Accounting Standards Codification 842 – Leases* (ASC 842), which requires virtually all leases, excluding mineral interest leases, to be recorded on the consolidated balance sheet (see Note A – New Accounting Pronouncements to the audited consolidated financial statements). At December 31, 2019, the Company had $486.6 million in operating lease obligations and $8.7 million in finance lease obligations. Management anticipates that, in the ordinary course of business, the Company will enter into additional royalty agreements for land and mineral reserves during 2020. As permitted, short-term leases are excluded from ASC 842 requirements and future noncancelable obligations for these leases as of December 31, 2019 are not immaterial.

The Company has purchase commitments for property, plant and equipment of $93.4 million as of December 31, 2019. The Company also has other purchase obligations related to energy and service contracts which totaled $82.9 million as of December 31, 2019.

The Company's contractual commitments as of December 31, 2019 are as follows:

(in millions)	Total	< 1 Year	1 to 3 Years	3 to 5 Years	> 5 Years
ON BALANCE SHEET:					
Long-term debt	$ 2,773.6	$ 340.0	$ 0.2	$ 696.7	$ 1,736.7
Postretirement benefits	13.0	2.0	2.8	2.5	5.7
Qualified pension plan contributions[1]	—	—	—	—	—
Unfunded pension plan contributions	106.4	7.8	31.2	20.2	47.2
Uncertain tax positions	27.2	—	27.2	—	—
Finance leases - principal portion	8.7	2.9	2.6	1.1	2.1
Operating leases	486.6	52.7	78.5	63.2	292.2
Other commitments	0.3	0.1	0.1	0.1	—
OFF BALANCE SHEET:					
Interest on publicly-traded long-term debt and lease obligations	1,511.8	116.9	220.9	215.3	958.7
Contracts of affreightment	133.9	15.8	32.4	33.5	52.2
Royalty agreements[2]	114.9	15.7	21.4	18.1	59.7
Purchase commitments - capital	93.4	93.4	—	—	—
Other commitments - energy and services	82.9	47.2	18.0	1.8	15.9
Total	$ 5,352.7	$ 694.5	$ 435.3	$ 1,052.5	$ 3,170.4

1 No contributions to the qualified pension plan are required in 2020 and contributions beyond 2020 are not determinable at this time.
2 Represents future minimum payments.

Notes A, H, J, K, M and O to the audited consolidated financial statements contain additional information regarding these commitments and should be read in conjunction with the above table.

Contingent Liabilities and Commitments

The Company has entered into standby letter of credit agreements relating to certain insurance claims, contract performance and permit requirements. At December 31, 2019, the Company had contingent liabilities guaranteeing its own performance under these outstanding letters of credit of $32.9 million.

In the normal course of business, at December 31, 2019, the Company was contingently liable for $395.1 million in surety bonds underwritten by Liberty Mutual, which guarantee its own performance and are required by certain states and municipalities and their related agencies. The Company has indemnified the underwriting insurance companies against any exposure under the surety bonds. In the Company's past experience, no material claims have been made against these financial instruments.

The Company is a co-borrower with an unconsolidated affiliate for a $15.5 million revolving line of credit agreement with Truist Bank, as successor by merger to SunTrust Bank and formerly known as Branch Banking and Trust Company. The affiliate has agreed to reimburse and indemnify the Company for any payments and expenses the Company may incur from this agreement. The Company holds a lien on the affiliate's membership interest in a joint venture as collateral for payment under the revolving line of credit.

OTHER FINANCIAL INFORMATION

Critical Accounting Policies and Estimates

The Company's audited consolidated financial statements include certain critical estimates regarding the effect of matters that are inherently uncertain. These estimates require management's subjective and complex judgments. Amounts reported in the Company's consolidated financial statements could differ materially if management used different assumptions in making these estimates, resulting in actual results differing from those estimates. Methodologies used and assumptions selected by management in making these estimates, as well as the related disclosures, have been reviewed by and discussed with the Company's Audit Committee. Management's determination of the critical nature of accounting estimates and judgments may change from time to time depending on facts and circumstances that management cannot currently predict.

Impairment Review of Goodwill

Goodwill is required to be tested annually for impairment. An interim review is performed between annual tests if facts and circumstances indicate a potential impairment. The impairment review of goodwill is a critical accounting estimate because goodwill represents 24% of the Company's total assets at December 31, 2019; the review requires management to apply judgment and make key assumptions; and an impairment charge could be material to the Company's financial condition and results of operations. The Company performs its impairment evaluation as of October 1, which represents the annual evaluation date.

The Company's reporting units, which represent the level at which goodwill is tested for impairment, are based on the operating segments of the Building Materials business. There is no goodwill related to the Magnesia Specialties business.

Certain of the aforementioned reporting units within the Building Materials business meet the aggregation criteria and are consolidated into reportable segments for financial reporting.

Goodwill is assigned to the respective reporting unit(s) based on the location of acquisitions at the time of consummation. If subsequent organizational changes result in operations being transferred to a different reporting unit, a proportionate amount of goodwill is transferred from the former to the new reporting unit. Goodwill is tested for impairment by comparing the reporting unit's fair value to its carrying value, which represents a Step-1 analysis. However, prior to Step 1, the Company may perform an optional qualitative assessment. As part of the qualitative assessment, the Company considers, among other things, the following events and circumstances: macroeconomic conditions, industry and market conditions, cost factors, overall financial performance and other business or reporting unit-specific events. If the Company concludes it is more-likely-than-not (i.e., a likelihood of more than 50%) that a reporting unit's fair value is higher than its carrying value, the Company does not perform any further goodwill impairment testing for that reporting unit. Otherwise, it proceeds to Step 1 of its goodwill impairment analysis. The Company may bypass the qualitative assessment for any reporting unit in any period and proceed directly with the quantitative calculation in Step 1. When the Company validates its conclusion by measuring fair value, it may resume performing a qualitative assessment for a reporting unit in any subsequent period. If the reporting unit's fair value exceeds its carrying value, no further calculation is necessary. A reporting unit with a carrying value in excess of its fair value constitutes a Step-1 failure and results in an impairment charge.

For the 2019 annual impairment evaluation, the Company performed a Step-1 analysis for all reporting units. The fair values were calculated using a discounted cash flow model. Key assumptions included management's estimates of changes in sales price, shipment volumes and production costs as well as assumptions of future profitability, capital requirements, discount rates ranging from 8.5% to 9.25% and a terminal growth rate of 2.5%. With the exception of the Cement and Southwest Ready Mix Division, the fair value of all reporting units exceeded the carrying value by more than 150%. The Cement and Southwest Ready Mix Division reporting unit's fair value exceeded its carrying value by 35%, or $701.5 million. For sensitivity purposes, a 100-basis-point increase in the discount rate, holding all other assumptions constant, would result in the Cement and Southwest Ready Mix Division reporting unit passing the Step-1 analysis by $343.5 million, or 17%. The Cement and Southwest Ready Mix Division reporting unit had $934.7 million of goodwill at December 31, 2019.

Future profitability and capital requirements are, by their nature, estimates. Price, cost and volume assumptions were based on various factors, including historical averages and current forecasts, external sources, and market conditions, while also considering any production capacity constraints. Capital requirements included maintenance-level needs and known efficiency- and capacity-increasing investments.

A discount rate is calculated for each reporting unit that requires a Step-1 analysis and represents its weighted average cost of capital. The calculation of the discount rate includes the following components, which are primarily based on published

sources: equity risk premium, historical beta, risk-free interest rate, small-stock premium, company-specific premium and borrowing rate.

The terminal growth rate was based on average GDP increases.

Management believes that all assumptions used were reasonable based on historical operating results and expected future trends. However, if future operating results are unfavorable as compared with forecasts, the results of future goodwill impairment evaluations could be negatively affected. Further, mineral reserves, which represent underlying assets producing the reporting units' cash flows for the aggregates product line, are depleting assets by their nature. Any potential impairment charges from future evaluations represent a risk to the Company.

Pension Expense-Selection of Assumptions

The Company sponsors noncontributory defined benefit pension plans that cover substantially all employees and a Supplemental Excess Retirement Plan (SERP) for certain retirees (see Note K to the audited consolidated financial statements). Annual pension expense (inclusive of SERP expense) consists of several components:

- *Service Cost,* which represents the present value of benefits attributed to services rendered in the current year, measured by expected future salary levels;
- *Interest Cost,* which represents one year's additional interest on the outstanding liability;
- *Expected Return on Assets,* which represents the expected investment return on pension plan assets; and
- *Amortization of Prior Service Cost and Actuarial Gains and Losses,*which represents components that are recognized over time rather than immediately. Prior service cost represents credit given to employees for years of service prior to plan inception, of which there is an insignificant amount at December 31, 2019. Actuarial gains and losses arise from changes in assumptions regarding future events or when actual returns on pension assets differ from expected returns. At December 31, 2019, the unrecognized actuarial loss was $229.4 million. Pension accounting rules currently allow companies to amortize the portion of the unrecognized actuarial loss that represents more than 10% of the greater of the projected benefit obligation or pension plan assets, using the average remaining service life for the amortization period. Therefore, the $229.4 million unrecognized actuarial loss consists of $131.6 million currently subject to amortization in 2020 and $97.8 million not subject to amortization in 2020. $13.5 million of amortization of the actuarial loss is estimated to be a component of 2020 annual pension expense.

These components are calculated annually to determine the pension expense reflected in the Company's results of operations.

Management believes the selection of assumptions related to the annual pension expense is a critical accounting estimate due to the high degree of volatility in the expense dependent on selected assumptions. The key assumptions are as follows:

- The *discount rate* is used to present value the pension obligation and represents the current rate at which the pension obligations could be effectively settled.
- The *expected long-term rate of return on pension plan assets* is used to estimate future asset returns and should reflect the average rate of long-term earnings on assets invested to provide for the benefits included in the projected benefit obligation.
- The *mortality table* represents published statistics on the expected lives of people.
- The *rate of increase in future compensation levels* is used to project the pay-related pension benefit formula and should estimate actual future compensation levels.

Management's selection of the discount rate is based on an analysis that estimates the current rate of return for high-quality, fixed-income investments with maturities matching the payment of pension benefits that could be purchased to settle the obligations. The Company selected a hypothetical portfolio of Moody's Aa bonds, with maturities that match the benefit obligations, to determine the discount rate. At December 31, 2019, the Company selected a discount rate assumption of 3.69%, a 69-basis-point decrease compared with the prior-year assumption. Of the four key assumptions, the discount rate is generally the most volatile and sensitive estimate. Accordingly, a change in this assumption has the most significant impact on the annual pension expense.

Management's selection of the rate of increase in future compensation levels is generally based on the Company's historical salary increases, including cost of living adjustments and merit and promotion increases, considering any known future trends. A higher rate of increase results in higher pension expense. The assumed long-term rate of increase is 4.5%.

Management's selection of the expected long-term rate of return on pension fund assets is based on a building-block approach, whereby the components are weighted based on the allocation of pension plan assets. Given that these returns are long term, there are generally not significant fluctuations in the expected rate of return from year to year. Based on the currently projected returns on these assets and related expenses, the Company selected an expected return on assets of 6.75%, the same as the prior-year rate. The following table presents the expected return on pension assets as compared with the actual return on pension assets:

(in millions)	**Expected Return on Pension Assets**	**Actual Return on Pension Assets**
2019	**$47.9**	**$131.3**
2018	$46.0	$(40.8)

The difference between the expected return and the actual return on pension assets is not immediately recognized in the consolidated statements of earnings. Rather, pension accounting rules require the difference to be included in actuarial gains and losses, which are amortized into annual pension expense as previously described.

At December 31, 2019, the Company estimates the remaining lives of participants in the pension plans using the Society of Actuaries' Pri-2012 Base Mortality Table. The no-collar table was used for salaried participants and the blue-collar table was used for hourly participants, both reflecting the experience of the Company's participants. The Company selected the MP-2018 scale for mortality improvement.

Assumptions are selected on December 31 to calculate the succeeding year's expense. For the 2019 pension expense, assumptions selected at December 31, 2018 were as follows:

Discount rate	4.38%
Rate of increase in future compensation levels	4.50%
Expected long-term rate of return on assets	6.75%
Average remaining service period for participants	10 years
Mortality Tables:	
Base Table	RP-2014
Mortality Improvement Scale	MP-2018

Using these assumptions, 2019 pension expense was $36.5 million. A change in the assumptions would have had the following impact on 2019 expense:

- A 25-basis-point change in the discount rate would have changed the 2019 expense by approximately $3.6 million.
- A 25-basis-point change in the expected long-term rate of return on assets would have changed the 2019 expense by approximately $1.8 million.

For 2020 pension expense, assumptions selected at December 31, 2019 were as follows:

Discount rate	3.69%
Rate of increase in future compensation levels	4.50%
Expected long-term rate of return on assets	6.75%
Average remaining service period for participants	10 years
Mortality Tables:	
Base Table	Pri-2012
Mortality Improvement Scale	MP-2018

Using these assumptions, 2020 pension expense is expected to be approximately $31.2 million based on current demographics and structure of the plans. Changes in the underlying assumptions would have the following estimated impact on the 2020 expected expense:

- A 25-basis-point change in the discount rate would change the 2020 expected expense by a pproximately $4.4 million.
- A 25-basis-point change in the expected long-term rate of return on assets would change the 2020 expected expense by approximately $2.2 million.

The Company made pension plan contributions of $58.9 million in 2019 and $350.8 million during the five-year period ended December 31, 2019. Despite these contributions, the Company’s pension plans are underfunded (projected benefit obligation exceeds the fair value of plan assets) by $109.8 million at December 31, 2019. The Company’s projected benefit obligation was $977.8 million at December 31, 2019, an increase of $129.9 million versus the prior year, driven by the lower discount rate. The Company expects to make pension plan and SERP contributions of $60.2 million in 2020, of which $50.0 million are voluntary.

Estimated Effective Income Tax Rate

The Company uses the liability method to determine its provision for income taxes. Accordingly, the annual provision for income taxes reflects estimates of the current liability for income taxes, estimates of the tax effect of financial reporting versus tax basis differences using statutory income tax rates and management’s judgment with respect to any valuation allowances on deferred tax assets. The result is management’s estimate of the annual effective tax rate (the “ETR”).

Income for tax purposes is determined through the application of the rules and regulations under the United States Internal Revenue Code and the statutes of various foreign, state and local tax jurisdictions in which the Company conducts business. Changes in the statutory tax rates and/or tax laws in these jurisdictions can have a material effect on the ETR. The effect of these changes, if material, is recognized when the change is enacted.

As prescribed by these tax regulations, as well as generally accepted accounting principles, the manner in which revenues and expenses are recognized for financial reporting and income tax purposes is not always the same. Therefore, these differences between the Company’s pretax income for financial reporting purposes and the amount of taxable income for income tax purposes are treated as either temporary or permanent, depending on their nature.

Temporary differences reflect revenues or expenses that are recognized in financial reporting in one period and taxable income in a different period. An example of a temporary difference is the use of the straight-line method of depreciation of machinery and equipment for financial reporting purposes and the use of an accelerated method for income tax purposes. Temporary differences result from differences between the financial reporting basis and tax basis of assets or liabilities and give rise to deferred tax assets or liabilities (i.e., future tax deductions or future taxable income). Therefore, when temporary differences occur, they are offset by a corresponding change in a deferred tax account. As such, total income tax expense as reported in the Company’s consolidated statements of earnings is not changed by temporary differences.

The Company has deferred tax liabilities, primarily for property, plant and equipment, goodwill and other intangibles, employee pension and postretirement benefits and partnerships and joint ventures. The deferred tax liabilities attributable to property, plant and equipment relate to accelerated depreciation and depletion methods used for income tax purposes as compared with the straight-line and units-of-production methods used for financial reporting purposes. These temporary differences will reverse over the remaining useful lives of the related assets. The deferred tax liabilities attributable to goodwill arise as a result of amortizing goodwill for income tax purposes but not for financial reporting purposes. This temporary difference reverses when goodwill is written off for financial reporting purposes, either through divestitures or an impairment charge. The timing of such events cannot be estimated. The deferred tax liabilities attributable to employee pension and postretirement benefits relate to deductions as plans are funded for income tax purposes compared with deductions for financial reporting purposes based on accounting standards. The reversal of these differences depends on the timing of the Company’s contributions to the related benefit plans as compared to the annual expense for financial reporting purposes. The deferred tax liabilities attributable to partnerships and joint ventures relate to the difference between the tax basis of the investments in partnerships and joint ventures when compared to the basis for financial reporting purposes. The temporary difference reverses through differences recognized over the life of the investment or through divestiture.

The Company has deferred tax assets, primarily for inventories, unvested stock-based compensation awards, unrecognized losses related to the funded status of the pension and postretirement benefit plans, valuation reserves, net operating loss carryforwards and tax credit carryforwards. The deferred tax assets attributable to inventories and valuation reserves relate

to the deduction of estimated cost reserves and various period expenses for financial reporting purposes that are deductible in a later period for income tax purposes. The reversal of these differences depends on facts and circumstances, including the timing of deduction for income tax purposes for reserves previously established and the establishment of additional reserves for financial reporting purposes. The deferred tax assets attributable to unvested stock-based compensation awards relate to differences in the timing of deductibility for financial reporting purposes versus income tax purposes. For financial reporting purposes, the fair value of the awards is deducted ratably over the requisite service period. For income tax purposes, no deduction is allowed until the award is vested or no longer subject to substantial risk of forfeiture. The Company records all excess tax benefits and tax deficiencies as income tax expense or benefit as a discrete event in the period in which the award vests or settles, increasing volatility in the income tax rate from period to period.

Business Combinations – Allocation of Purchase Price

The Company's Board of Directors and management regularly review strategic long-term plans, including potential investments in value-added acquisitions of related or similar businesses, which would increase the Company's market share and/or are related to the Company's existing markets. When an acquisition is completed, the Company's consolidated statements of earnings include the operating results of the acquired business starting from the date of acquisition, which is the date control is obtained. The purchase price is determined based on the fair value of assets and equity interests given to the seller and any future obligations to the seller as of the date of acquisition. Additionally, conversion of the seller's equity awards into equity awards of the Company can affect the purchase price. The Company allocates the purchase price to the fair values of the tangible and intangible assets acquired and liabilities assumed as valued at the date of acquisition. Goodwill is recorded for the excess of the purchase price over the net of the fair value of the identifiable assets acquired and liabilities assumed as of the acquisition date. The purchase price allocation is a critical accounting policy because the estimation of fair values of acquired assets and assumed liabilities is judgmental and requires various assumptions. Further, the amounts and useful lives assigned to depreciable and amortizable assets versus amounts assigned to goodwill and indefinite-lived intangible assets, which are not amortized, can significantly affect the results of operations in the period of and for periods subsequent to a business combination.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction, and, therefore, represents an exit price. A fair-value measurement assumes the highest and best use of the asset by market participants, considering the use of the asset that is physically possible, legally permissible, and financially feasible at the measurement date. The Company assigns the highest level of fair value available to assets acquired and liabilities assumed based on the following options:

- Level 1 – Quoted prices in active markets for identical assets and liabilities
- Level 2 – Observable inputs, other than quoted prices, for similar assets or liabilities in active markets
- Level 3 – Unobservable inputs, used to value the asset or liability which includes the use of valuation models

Level 1 fair values are used to value investments in publicly-traded entities and assumed obligations for publicly-traded long-term debt.

Level 2 fair values are typically used to value acquired receivables, inventories, machinery and equipment, land, buildings, deferred income tax assets and liabilities, and accruals for payables, asset retirement obligations, environmental remediation and compliance obligations, and contingencies. Additionally, Level 2 fair values are typically used to value assumed contracts at other-than-market rates.

Level 3 fair values are used to value acquired mineral reserves and mineral interests produced and sold as final products, and separately-identifiable intangible assets. The fair values of mineral reserves and mineral interests are determined using an excess earnings approach, which requires management to estimate future cash flows, net of capital investments in the specific operation and contributory asset charges. The estimate of future cash flows is based on available historical information and future expectations and assumptions determined by management, but is inherently uncertain. Key assumptions in estimating future cash flows include changes in sales price, shipment volumes and production costs as well as capital needs. The present value of the projected net cash flows represents the fair value assigned to mineral reserves and mineral interests. The discount rate is a significant assumption used in the valuation model and is based on the required rate of return that a hypothetical market participant would require if purchasing the acquired business, with an adjustment for the risk of these assets not generating the projected cash flows.

The Company values separately-identifiable acquired intangible assets which may include, but are not limited to, permits, customer relationships, water rights and noncompetition agreements. The fair values of these assets are typically determined by an excess earnings method, a replacement cost method or, in the case of water rights, a market approach.

The useful lives of amortizable intangible assets and the remaining useful lives for acquired machinery and equipment have a significant impact on earnings. The selected lives are based on the expected periods that the assets will provide value to the Company subsequent to the business combination.

The Company may adjust the amounts recognized for a business combination during a measurement period after the acquisition date. Any such adjustments are based on the Company obtaining additional information that existed at the acquisition date regarding the assets acquired or the liabilities assumed. Measurement-period adjustments are generally recorded as increases or decreases to the goodwill recognized in the transaction. The measurement period ends once the Company has obtained all necessary information that existed as of the acquisition date, but does not extend beyond one year from the date of acquisition. Any adjustments to assets acquired or liabilities assumed beyond the measurement period are recorded through earnings.

Property, Plant and Equipment

Net property, plant and equipment represent 51% of total assets at December 31, 2019. Accordingly, accounting for these assets represents a critical accounting policy. Useful lives of the assets can vary depending on factors, including production levels, geographic location, portability and maintenance practices. Additionally, climate and inclement weather can reduce the useful life of an asset. Historically, the Company has not recognized significant losses on the disposal or retirement of fixed assets.

Aggregates mineral reserves and mineral interests are components within the plant, property and equipment balance on the consolidated balance sheets. The Company evaluates aggregates reserves, including those used in the cement manufacturing process, in several ways, depending on the geology at a particular location and whether the location is a greensite, an acquisition or an existing operation. Greensites require an extensive drilling program before any significant investment is made in terms of time, site development or efforts to obtain appropriate zoning and permitting (see *Environmental Regulation and Litigation* section). The depth of overburden and the quality and quantity of the aggregates reserves are significant factors in determining whether to pursue opening the site. Further, the estimated average selling price for products in a market is also a significant factor in concluding that reserves are economically mineable. If the Company's analysis based on these factors is satisfactory, the total aggregates reserves available are calculated and a determination is made whether to open the location. Reserve evaluation at existing locations is typically performed to evaluate purchasing adjoining properties, for quality control, calculating overburden volumes and for mine planning. Reserve evaluation of acquisitions may require a higher degree of sampling to locate any problem areas that may exist and to verify the total reserves.

Well-ordered subsurface sampling of the underlying deposit is basic to determining reserves at any location. This subsurface sampling usually involves one or more types of drilling, determined by the nature of the material to be sampled and the particular objective of the sampling. The Company's objectives are to ensure that the underlying deposit meets aggregates specifications and the total reserves on site are sufficient for mining and economically recoverable. Locations underlain with hard rock deposits, such as granite and limestone, are drilled using the diamond core method, which provides the most useful and accurate samples of the deposit. Selected core samples are tested for soundness, abrasion resistance and other physical properties relevant to the aggregates industry and depend on the aggregates use. The number and depth of the holes are determined by the size of the site and the complexity of the site-specific geology. Some geological factors that may affect the number and depth of holes include faults, folds, chemical irregularities, clay pockets, thickness of formations and weathering. A typical spacing of core holes on the area to be tested is one hole for every four acres, but wider spacing may be justified if the deposit is homogeneous.

Despite previous drilling and sampling, once accessed, the quality of reserves within a deposit can vary. Construction contracts, for the infrastructure market in particular, include specifications related to the aggregates material. If a flaw in the deposit is discovered, the aggregates material may not meet the required specifications. Although it is possible that the aggregates material can still be used for non-specification uses, this can have an adverse effect on the Company's ability to serve certain customers or on the Company's profitability. In addition, other issues can arise that limit the Company's ability to access reserves in a particular quarry, including geological occurrences, blasting practices and zoning issues.

Locations underlain with sand and gravel are typically drilled using the auger method, whereby a six-inch corkscrew brings up material from below the ground which is then sampled. Deposits in these locations are typically limited in thickness.

Additionally, the quality and sand-to-gravel ratio of the deposit can vary both horizontally and vertically. Hole spacing at these locations is approximately one hole for every acre to ensure a representative sampling.

The geologist conducting the reserve evaluation makes the decision as to the number of holes and the spacing in accordance with standards and procedures established by the Company. Further, the anticipated heterogeneity of the deposit, based on U.S. geological maps, also dictates the number of holes drilled.

The generally accepted reserve categories for the aggregates industry and the designations the Company uses for reserve categories are summarized as follows:

Proven Reserves – These reserves are designated using closely spaced drill data as described above and a determination by a professional geologist that the deposit is relatively homogeneous based on the drilling results and exploration data provided in U.S. geologic maps, the U.S. Department of Agriculture soil maps, aerial photographs and/or electromagnetic, seismic or other surveys conducted by independent geotechnical engineering firms. The proven reserves that are recorded reflect reductions incurred through quarrying that result from leaving ramps, safety benches, pillars (underground) and the fines (small particles) that will be generated during processing. Proven reserves are further reduced by reserves that are under the plant and stockpile areas, as well as setbacks from neighboring property lines. The Company typically assumes a loss factor of 25%. However, the assumed loss factor at coastal operations is approximately 40% due to the nature of the material. The assumed loss factor for underground operations is 35% primarily due to pillars.

Probable Reserves – These reserves are inferred utilizing fewer drill holes and/or assumptions about the economically recoverable reserves based on local geology or drill results from adjacent properties.

The Company's proven and probable reserves reflect reasonable economic and operating constraints as to maximum depth of overburden and stone excavation, and also include reserves at the Company's inactive and undeveloped sites, including some sites where permitting and zoning applications will not be filed until warranted by expected future growth. The Company has historically been successful in obtaining and maintaining appropriate zoning and permitting (see *Environmental Regulation and Litigation* section).

Mineral reserves and mineral interests, when acquired in connection with a business combination, are valued using an excess earnings approach for the life of the proven and probable reserves.

The Company uses proven and probable reserves as the denominator in its units-of-production calculation to record depletion expense for its mineral reserves and mineral interests. For 2019, depletion expense was $37.5 million.

The Company begins capitalizing quarry development costs at a point when reserves are determined to be proven or probable, economically mineable and when demand supports investment in the market. Capitalization of these costs ceases when production commences. Capitalized quarry development costs are classified as land improvements.

New mining areas may be developed at existing quarries in order to access additional reserves. When this occurs, management reviews the facts and circumstances of each situation in making a determination as to the appropriateness of capitalizing or expensing the related pre-production development costs. If the additional mining location operates in a separate and distinct area of a quarry, the costs are capitalized as quarry development costs and depreciated over the life of the uncovered reserves. Further, a separate asset retirement obligation is created for additional mining areas when the liability is incurred. Once a new mining area enters the production phase, all post-production stripping costs are expensed as incurred as periodic inventory production costs.

Forward-Looking Statements – Safe Harbor Provisions

If you are interested in Martin Marietta Materials, Inc. stock, management recommends that, at a minimum, you read the Company's Forms 10-K, 10-Q and 8-K reports to the SEC over the past year, in addition to the Annual Report. The Company's recent proxy statement for the annual meeting of shareholders also contains important information. These and other materials that have been filed with the SEC are accessible through the Company's website at www.martinmarietta.com and are also available at the SEC's website at www.sec.gov. You may also write or call the Company's Corporate Secretary, who will provide copies of such reports.

Investors are cautioned that all statements in this Annual Report that relate to the future involve risks and uncertainties, and are based on assumptions that the Company believes in good faith are reasonable but which may be materially different from actual results. These statements are "forward-looking" statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements give the investor the Company's expectations or forecasts of future events. These statements can be identified by the fact that they do not relate only to historical or current facts. They may use words such as "anticipate," "expect," "should be," "believe," "will," and other words of similar meaning in connection with future events or future operating or financial performance. Any or all of the Company's forward-looking statements here and in other publications may turn out to be wrong.

These forward-looking statements are subject to certain risks and uncertainties that may affect performance, including but not limited to: the performance of the United States economy; shipment declines resulting from economic events beyond the Company's control; a widespread decline in aggregates pricing, including a decline in aggregates shipment volume negatively affecting aggregates price; the history of both cement and ready mixed concrete being subject to significant changes in supply, demand and price fluctuations; the termination, capping and/or reduction of the federal and/or state gasoline tax(es) or other revenue related to public construction; the level and timing of federal, state and/or local transportation or infrastructure or public projects funding, most particularly in Texas, Colorado, North Carolina, Georgia, Iowa and Maryland; the volatility in the commencement of infrastructure projects; the United States Congress' inability to reach agreement among themselves or with the Administration on policy issues that impact the federal budget; the ability of states and/or other entities to finance approved projects either with tax revenues or alternative financing structures; levels of construction spending in the markets the Company serves; a reduction in defense spending, and the subsequent impact on construction activity on or near military bases; a decline in the commercial component of the nonresidential construction market, notably office and retail space; a decline in energy-related construction activity resulting from a sustained period of low global oil prices or changes in oil production patterns in response to this decline, particularly in Texas; increasing residential mortgage rates and other factors that could result in a slowdown in residential construction; unfavorable weather conditions, particularly Atlantic Ocean and Gulf of Mexico hurricane activity, the late start to spring or the early onset of winter and the impact of a drought or excessive rainfall in the markets served by the Company, any of which can significantly affect production schedules, volumes, product and/or geographic mix and profitability; the volatility of fuel costs, particularly diesel fuel, and the impact on the cost, or the availability generally, of other consumables, namely steel, explosives, tires and conveyor belts, and with respect to the Company's Magnesia Specialties business, natural gas; continued increases in the cost of other repair and supply parts; construction labor shortages and/or supply-chain challenges; unexpected equipment failures, unscheduled maintenance, industrial accident or other prolonged and/or significant disruption to production facilities; increasing governmental regulation, including environmental laws; the failure of relevant government agencies to implement expected regulatory reductions; transportation availability or a sustained reduction in capital investment by the railroads, notably the availability of railcars, locomotive power and the condition of rail infrastructure to move trains to supply the Company's Texas, Colorado, Florida, North Carolinas and the Gulf Coast markets, including the movement of essential dolomitic lime for magnesia chemicals to the Company's plant in Manistee, Michigan and its customers; increased transportation costs, including increases from higher or fluctuating passed-through energy costs or fuel surcharges, and other costs to comply with tightening regulations, as well as higher volumes of rail and water shipments; availability of trucks and licensed drivers for transport of the Company's materials; availability and cost of construction equipment in the United States; weakening in the steel industry markets served by the Company's dolomitic lime products; trade disputes with one or more nations impacting the U.S. economy, including the impact of tariffs on the steel industry; unplanned changes in costs or realignment of customers that introduce volatility to earnings, including that of the Magnesia Specialties business that is running at capacity; proper functioning of information technology and automated operating systems to manage or support operations; inflation and its effect on both production and interest costs; the concentration of customers in construction markets and the increased risk of potential losses on customer receivables; the impact of the level of demand in the Company's end-use markets, production levels and management of production costs on the operating leverage and therefore profitability of the Company; the possibility that the expected synergies from acquisitions will not be realized or will not be

realized within the expected time period, including achieving anticipated profitability to maintain compliance with the Company's leverage ratio debt covenant; changes in tax laws, the interpretation of such laws and/or administrative practices that would increase the Company's tax rate; violation of the Company's debt covenant if price and/or volumes return to previous levels of instability; downward pressure on the Company's common stock price and its impact on goodwill impairment evaluations; the possibility of a reduction of the Company's credit rating to non-investment grade; shipment declines resulting from economic events beyond the Company's control; the history of both cement and ready mixed concrete being subject to significant changes in supply, demand and price fluctuations; and other risk factors listed from time to time found in the Company's filings with the SEC. Further, increased highway construction funding pressures resulting from either federal or state issues can affect profitability. If these negatively affect transportation budgets more than in the past, construction spending could be reduced. Cement is subject to cyclical supply and demand and price fluctuations. The Magnesia Specialties business essentially runs at capacity; therefore, any unplanned changes in costs or realignment of customers introduce volatility to the earnings of this segment.

The Company's principal business serves customers in construction markets. This concentration could increase the risk of potential losses on customer receivables; however, payment bonds normally posted on public projects, together with lien rights on private projects, mitigate the risk of uncollectible receivables. The level of demand in the Company's end-use markets, production levels and the management of production costs will affect the operating leverage of the Building Materials business and, therefore, profitability. Production costs in the Building Materials business are also sensitive to energy and raw material prices, both directly and indirectly. Diesel fuel, coal and other consumables change production costs directly through consumption or indirectly by increased energy-related input costs, such as steel, explosives, tires and conveyor belts. Fluctuating diesel fuel pricing also affects transportation costs, primarily through fuel surcharges in the Company's long-haul distribution network. The Magnesia Specialties business is sensitive to changes in domestic steel capacity utilization as well as the absolute price and fluctuation in the cost of natural gas.

Transportation in the Company's long-haul network, particularly the supply of rail cars and locomotive power and condition of rail infrastructure to move trains, affects the Company's efficient transportation of aggregates products in certain markets, most notably Texas, Colorado, Florida, North Carolina and the Gulf Coast. In addition, availability of rail cars and locomotives affects the Company's movement of essential dolomitic lime for magnesia chemicals to both the Company's plant in Manistee, Michigan, and its customers. The availability of trucks, drivers and railcars to transport the Company's product, particularly in markets experiencing high growth and increased demand, is also a risk and pressures the associated costs.

All of the Company's businesses are also subject to weather-related risks that can significantly affect production schedules and profitability. The first and fourth quarters are most adversely affected by winter weather. Hurricane activity in the Atlantic Ocean and Gulf Coast generally is most active during the third and fourth quarters. In fact, in September and October 2018, respectively, Hurricanes Florence and Michael generated winds, rainfall and flooding which disrupted operations in the Carolinas, Florida and Georgia. In 2019, Hurricane Dorian and Tropical Storm Imelda temporarily disrupted the Company's operations in the Bahamas and Texas, respectively. However, after flood waters recede, management typically expects an increase in construction activity as roads, homes and businesses are repaired.

Risks also include shipment declines resulting from economic events beyond the Company's control.

In addition to the foregoing, other factors that could cause actual results to differ materially from the forward-looking statements in this Annual Report include but are not limited to those listed above in Item 1, "Business – Competition," Item 1A, "Risk Factors," and "Note A: Accounting Policies" and "Note O: Commitments and Contingencies" of the "Notes to Financial Statements" of the audited consolidated financial statements included in this Form 10-K.

ITEM 7A – QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As discussed earlier, the Company's operations are highly dependent upon the interest rate-sensitive construction and steelmaking industries. Consequently, these marketplaces could experience lower levels of economic activity in an environment of rising interest rates or escalating costs (see *Business Environment* section included under Item 7 – MD&A of this Form 10-K).

Management has considered the current economic environment and its potential impact to the Company's business. Demand for aggregates products, particularly in the infrastructure construction market, is affected by federal and state budget and deficit issues. Further, delays or cancellations of capital projects in the nonresidential and residential construction markets could occur if companies and consumers are unable to obtain financing for construction projects or if consumer confidence is eroded by economic uncertainty.

Demand in the residential construction market is affected by interest rates. During 2019, the Federal Reserve lowered the federal funds rate several times throughout the year. The rate at December 31, 2019 was 1.55%. The residential construction market accounted for approximately 22% of the Company's aggregates product line shipments in 2019.

Aside from these inherent risks from within its operations, the Company's earnings are also affected by changes in short-term interest rates.

Variable-Rate Borrowing Facilities

At December 31, 2019, the Company had a $700 million Revolving Facility and a $400 million Trade Receivable Facility. The Company also has $300 million of variable-rate senior notes outstanding. Borrowings under these facilities bear interest at a variable interest rate. A hypothetical 100-basis-point increase in interest rates on borrowings of $640 million, which was the collective outstanding balance at December 31, 2019, would increase interest expense by $6.4 million on an annual basis.

Pension Expense

The Company's results of operations are affected by its pension expense. Assumptions that affect pension expense include the discount rate and, for the defined benefit pension plans only, the expected long-term rate of return on assets. Therefore, the Company has interest rate risk associated with these factors. The impact of hypothetical changes in these assumptions on the Company's annual pension expense is discussed in the *Critical Accounting Policies and Estimates – Pension Expense – Selection of Assumptions* section included under Item 7 – MD&A of this Form 10-K.

Energy Costs

Energy costs, including diesel fuel, natural gas, coal, petroleum coke and liquid asphalt, represent significant production costs of the Company. The Company may be unable to pass along increases in the costs of energy to customers in the form of price increases for the Company's products. The cement product line and Magnesia Specialties business each have varying fixed-price agreements for a portion of their energy requirements. A hypothetical 10% change in the Company's energy prices in 2020 as compared with 2019, assuming constant volumes, would change 2020 energy expense by $27.9 million.

Commodity Risk

Cement is a commodity and competition is based principally on price, which is highly sensitive to changes in supply and demand. Prices are often subject to material changes in response to relatively minor fluctuations in supply and demand, general economic conditions and other market conditions beyond the Company's control. Increases in the production capacity of industry participants or increases in cement imports tend to create an oversupply of such products leading to an imbalance between supply and demand, which can have a negative impact on product prices. There can be no assurance that product prices will not decline in the future or that such declines will not have a material adverse effect on the Company's business, financial condition and results of operations. A hypothetical 10% change in sales price of the cement product line would impact cement product line revenues by $43.9 million, excluding the net impact of internal sales.

Cement is a key raw material in the production of ready mixed concrete. The Company may be unable to pass along increases in the costs of cement and raw materials to customers in the form of price increases for the Company's products. A hypothetical 10% change in cement costs in 2020 compared with 2019, assuming constant volumes, would change the ready mixed concrete product line cost of sales by $24.5 million.

ITEM 8 – FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Additional information required in response to this Item 8 is included under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations," included as Item 7 of this Form 10-K.

Statement of Responsibility and Management's Report on Internal Control over Financial Reporting

Management's Statement of Responsibility

The management of Martin Marietta Materials, Inc. (the "Company" or "Martin Marietta") is responsible for the consolidated financial statements, the related financial information contained in this Form 10-K and the establishment and maintenance of adequate internal control over financial reporting. The consolidated balance sheets for Martin Marietta, at December 31, 2019 and 2018, and the related consolidated statements of earnings, comprehensive earnings, total equity and cash flows for each of the three years in the period ended December 31, 2019, include amounts based on estimates and judgments and have been prepared in accordance with accounting principles generally accepted in the United States applied on a consistent basis.

A system of internal control over financial reporting is designed to provide reasonable assurance, in a cost-effective manner, that assets are safeguarded, transactions are executed and recorded in accordance with management's authorization, accountability for assets is maintained and financial statements are prepared and presented fairly in accordance with accounting principles generally accepted in the United States. Internal control systems over financial reporting have inherent limitations and may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

The Company operates in an environment that establishes an appropriate system of internal control over financial reporting and ensures that the system is maintained, assessed and monitored on a periodic basis. This internal control system includes examinations by internal audit staff and oversight by the Audit Committee of the Board of Directors.

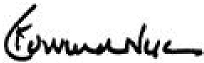
The Company's management recognizes its responsibility to foster a strong ethical climate. Management has issued written policy statements that document the Company's business code of ethics. The importance of ethical behavior is regularly communicated to all employees through the distribution of the *Code of Ethical Business Conduct* and through ongoing education and review programs designed to create a strong commitment to ethical business practices.

The Audit Committee of the Board of Directors, which consists of three independent, nonemployee directors, meets periodically and separately with management, the independent auditors and the internal auditors to review the activities of each. The Audit Committee meets standards established by the Securities and Exchange Commission (SEC) and the New York Stock Exchange as they relate to the composition and practices of audit committees.

Management's Report on Internal Control over Financial Reporting

The management of Martin Marietta is responsible for establishing and maintaining adequate internal control over financial reporting. Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2019. In making this assessment, management used the criteria set forth in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on management's assessment under the 2013 framework, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2019.

The consolidated financial statements of the Company as of December 31, 2019 and 2018, and for each of the three years in the period ended December 31, 2019, and the effectiveness of the Company's internal control over financial reporting as of December 31, 2019, have been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, whose report appears on the following page.



C. Howard Nye, *Chairman, President and Chief Executive Officer*

James A. J. Nickolas, *Senior Vice President and Chief Financial Officer*

February 21, 2020

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Martin Marietta Materials, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Martin Marietta Materials, Inc. and its subsidiaries (the "Company") as of December 31, 2019 and 2018, and the related consolidated statements of earnings, comprehensive earnings, total equity and cash flows for each of the three years in the period ended December 31, 2019, including the related notes and schedule of valuation and qualifying accounts for each of the three years in the period ended December 31, 2019 appearing under Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note A to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, 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 opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. 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 audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements 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 audits 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. Our audit of internal control over financial reporting 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 audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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 (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) 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 (iii) 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.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated 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.

Goodwill Impairment Assessment - Cement and Southwest Ready Mix Division Reporting Unit

As described in Notes A and C to the consolidated financial statements, the Company's consolidated goodwill balance was $2.4 billion as of December 31, 2019. Of the consolidated goodwill balance, $934.7 million relates to the Cement and Southwest Ready Mix Division reporting unit. The carrying values of goodwill are reviewed annually, as of October 1, for impairment by comparing the reporting unit's fair value to its carrying value. An interim review is performed between annual tests if facts and circumstances indicate potential impairment. The goodwill impairment assessment requires management to apply judgment and make assumptions. A Step 1 impairment analysis was performed for the aforementioned reporting unit as of October 1, 2019. The fair value was calculated using a discounted cash flow model. Key assumptions included management's estimates of changes in sales price, shipment volumes and production costs, as well as assumptions of future profitability, capital requirements, discount rate and terminal growth rate. The Cement and Southwest Ready Mix Division reporting unit's fair value exceeded its carrying value by 35%, or $701.5 million.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of the Cement and Southwest Ready Mix Division reporting unit is a critical audit matter are there was significant judgment by management when developing the fair value measurement of the reporting unit. This in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and in evaluating the audit evidence relating to management's significant assumptions, including changes in sales price, shipment volumes, production costs, and the discount rate. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the Company's reporting units. These procedures also included, among others (i) testing management's process for developing the fair value estimate, (ii) evaluating the appropriateness of the discounted cash flow model, (iii) testing the completeness, accuracy and relevance of underlying data used in the model, and (iv) evaluating the reasonableness of management's significant assumptions used in the model, including changes in sales price, shipment volumes, production costs, and the discount rate. Evaluating management's assumptions related to changes in sales price, shipment volumes, and production costs involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting unit, (ii) the consistency with external industry reports, and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's discounted cash flow model and certain significant assumptions, including the discount rate.

/s/ PricewaterhouseCoopers LLP
Raleigh, North Carolina
February 21, 2020

We have served as the Company's auditor since 2016.

Financial Statements

Martin Marietta Materials, Inc. and Consolidated Subsidiaries

Consolidated Statements of Earnings

years ended December 31 (in millions, except per share data)	**2019**	2018	2017
Products and services revenues	**$ 4,422.3**	$ 3,980.4	$ 3,723.5
Freight revenues	**316.8**	263.9	242.1
Total revenues	**4,739.1**	4,244.3	3,965.6
Cost of revenues - products and services	**3,239.1**	3,009.8	2,749.5
Cost of revenues - freight	**321.0**	267.9	244.2
Total cost of revenues	**3,560.1**	3,277.7	2,993.7
Gross Profit	**1,179.0**	966.6	971.9
Selling, general and administrative expenses	**302.7**	280.6	262.1
Acquisition-related expenses, net	**0.5**	13.5	8.6
Other operating (income) and expenses, net	**(9.1)**	(18.2)	0.8
Earnings from Operations	**884.9**	690.7	700.4
Interest expense	**129.3**	137.1	91.5
Other nonoperating expenses and (income), net	**7.3**	(22.5)	(10.0)
Earnings before income tax expense (benefit)	**748.3**	576.1	618.9
Income tax expense (benefit)	**136.3**	105.7	(94.5)
Consolidated net earnings	**612.0**	470.4	713.4
Less: Net earnings attributable to noncontrolling interests	**0.1**	0.4	0.1
Net Earnings Attributable to Martin Marietta	**$ 611.9**	$ 470.0	$ 713.3
Net Earnings Attributable to Martin Marietta Per Common Share (see Note A)			
Basic attributable to common shareholders	**$ 9.77**	$ 7.46	$ 11.30
Diluted attributable to common shareholders	**$ 9.74**	$ 7.43	$ 11.25
Weighted-Average Common Shares Outstanding			
Basic	**62.5**	62.9	62.9
Diluted	**62.7**	63.1	63.2

The accompanying Notes to the Financial Statements are an integral part of these statements.

Martin Marietta Materials, Inc. and Consolidated Subsidiaries

Consolidated Statements of Comprehensive Earnings

years ended December 31 (in millions)	2019	2018	2017
Consolidated Net Earnings	**$ 612.0**	$ 470.4	$ 713.4
Other comprehensive (loss) earnings, net of tax:			
Defined benefit pension and postretirement plans:			
Net loss arising during period, net of tax of $(4.8), $(7.6) and $(2.6), respectively	**(14.5)**	(22.9)	(8.1)
Amortization of prior service credit, net of tax of $(0.2), $(0.5) and $(0.5), respectively	**(0.6)**	(1.5)	(0.8)
Amortization of actuarial loss, net of tax of $ 3.8, $3.2 and $5.3, respectively	**11.7**	9.5	8.5
Amount recognized in net periodic pension cost due to settlement, net of tax of $0.0, $0.7 and $0.0 respectively	**—**	2.2	—
	(3.4)	(12.7)	(0.4)
Foreign currency translation gain (loss)	**1.2**	(2.1)	1.2
Amortization of terminated value of forward starting interest rate swap agreements into interest expense, net of tax of $ 0.0, $0.2 and $0.6, respectively	**—**	0.3	0.8
	(2.2)	(14.5)	1.6
Consolidated comprehensive earnings	**609.8**	455.9	715.0
Less: Comprehensive earnings attributable to noncontrolling interests	**0.1**	0.4	0.1
Comprehensive Earnings Attributable to Martin Marietta	**$ 609.7**	$ 455.5	$ 714.9

The accompanying Notes to the Financial Statements are an integral part of these statements.

Martin Marietta Materials, Inc. and Consolidated Subsidiaries

Consolidated Balance Sheets

December 31 (in millions, except par value data)	**2019**	2018
Assets		
Current Assets:		
Cash and cash equivalents	**$ 21.0**	$ 44.9
Accounts receivable, net	**573.7**	523.3
Inventories, net	**690.8**	663.0
Other current assets	**141.2**	134.6
Total Current Assets	**1,426.7**	1,365.8
Property, plant and equipment, net	**5,206.0**	5,157.2
Goodwill	**2,396.8**	2,399.1
Other intangibles, net	**486.8**	501.3
Operating lease right-of-use assets, net	**481.9**	—
Other noncurrent assets	**133.4**	128.0
Total Assets	**$ 10,131.6**	$ 9,551.4
Liabilities and Equity		
Current Liabilities:		
Accounts payable	**$ 229.6**	$ 210.8
Accrued salaries, benefits and payroll taxes	**56.7**	51.4
Accrued insurance and other taxes	**63.1**	63.6
Current maturities of long-term debt	**340.0**	390.0
Operating lease liabilities	**52.7**	—
Other current liabilities	**96.4**	70.9
Total Current Liabilities	**838.5**	786.7
Long-term debt	**2,433.6**	2,730.4
Deferred income taxes, net	**733.0**	705.6
Noncurrent operating lease liabilities	**433.9**	—
Other noncurrent liabilities	**339.3**	379.3
Total Liabilities	**4,778.3**	4,602.0
Equity:		
Common stock ($ 0.01 par value; 100.0 shares authorized; 62.4 and 62.5 shares outstanding at December 31, 2019 and 2018, respectively)	**0.6**	0.6
Preferred stock ($ 0.01 par value; 10.0 shares authorized; no shares outstanding)	**—**	—
Additional paid-in capital	**3,418.8**	3,396.1
Accumulated other comprehensive loss	**(145.8)**	(143.6)
Retained earnings	**2,077.2**	1,693.3
Total Shareholders' Equity	**5,350.8**	4,946.4
Noncontrolling interests	**2.5**	3.0
Total Equity	**5,353.3**	4,949.4
Total Liabilities and Equity	**$ 10,131.6**	$ 9,551.4

The accompanying Notes to the Financial Statements are an integral part of these statements.

Martin Marietta Materials, Inc. and Consolidated Subsidiaries

Consolidated Statements of Cash Flows

years ended December 31 (in millions)	2019	2018	2017
Cash Flows from Operating Activities:			
Consolidated net earnings	**$ 612.0**	$ 470.4	$ 713.4
Adjustments to reconcile consolidated net earnings to net cash provided by operating activities:			
Depreciation, depletion and amortization	**371.5**	344.0	297.2
Stock-based compensation expense	**34.1**	29.3	30.5
Gains on divestitures and sales of assets	**(3.1)**	(39.3)	(19.4)
Deferred income taxes, net	**29.4**	85.1	(239.1)
Noncash portion of asset and portfolio rationalization charge	**—**	17.0	—
Other items, net	**8.6**	(9.0)	(13.4)
Changes in operating assets and liabilities, net of effects of acquisitions and divestitures:			
Accounts receivable, net	**(50.4)**	(10.6)	(29.3)
Inventories, net	**(27.7)**	(22.0)	(79.0)
Accounts payable	**25.9**	20.1	(17.9)
Other assets and liabilities, net	**(34.2)**	(179.9)	14.6
Net Cash Provided by Operating Activities	**966.1**	705.1	657.6
Cash Flows from Investing Activities:			
Additions to property, plant and equipment	**(393.5)**	(376.0)	(410.3)
Acquisitions, net of cash acquired	**—**	(1,642.1)	(12.1)
Proceeds from divestitures and sales of assets	**8.4**	69.1	36.0
Payment of railcar construction advances	**—**	(79.4)	(43.6)
Reimbursement of railcar construction advances	**—**	79.4	43.6
Investments in life insurance contracts, net	**0.6**	0.8	0.3
Other investing activities, net	**(1.4)**	—	—
Net Cash Used for Investing Activities	**(385.9)**	(1,948.2)	(386.1)
Cash Flows from Financing Activities:			
Borrowings of long-term debt	**625.0**	1,000.0	2,408.8
Repayments of long-term debt	**(975.1)**	(910.1)	(1,065.0)
Debt issuance costs	**—**	(3.9)	(2.2)
Payments on finance lease obligations	**(11.0)**	—	—
Payments on capital lease obligations	**—**	(3.5)	(3.5)
Dividends paid	**(129.8)**	(116.4)	(108.9)
Repurchases of common stock	**(98.2)**	(100.4)	(100.0)
Payments of deferred acquisition consideration	**—**	(6.7)	(2.8)
Purchase of the noncontrolling interest in the existing joint venture	**—**	(12.8)	—
Distributions to owners of noncontrolling interest	**(0.6)**	—	—
Contributions by noncontrolling interest to joint venture	**—**	—	0.2
Proceeds from exercise of stock options	**13.7**	7.3	10.1
Shares withheld for employees' income tax obligations	**(28.1)**	(11.9)	(11.8)
Net Cash (Used for) Provided by Financing Activities	**(604.1)**	(158.4)	1,124.9
Net (Decrease) Increase in Cash and Cash Equivalents	**(23.9)**	(1,401.5)	1,396.4
Cash and Cash Equivalents, beginning of year	**44.9**	1,446.4	50.0
Cash and Cash Equivalents, end of year	**$ 21.0**	$ 44.9	$ 1,446.4

The accompanying Notes to the Financial Statements are an integral part of these statements.

Martin Marietta Materials, Inc. and Consolidated Subsidiaries

Consolidated Statements of Total Equity

(in millions, except per share data)	Shares of Common Stock	Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive (Loss) Earnings	Retained Earnings	Total Shareholders' Equity	Noncontrolling Interests	Total Equity
Balance at December 31, 2016	63.2	$ 0.6	$ 3,334.5	$ (130.7)	$ 935.7	$ 4,140.1	$ 2.5	$ 4,142.6
Consolidated net earnings	—	—	—	—	713.3	713.3	0.1	713.4
Other comprehensive earnings	—	—	—	1.6	—	1.6	—	1.6
Dividends declared ($1.72 per common share)	—	—	—	—	(108.9)	(108.9)	—	(108.9)
Issuances of common stock for stock award plans	0.2	—	14.9	—	—	14.9	—	14.9
Shares withheld for employees' income tax obligations	—	—	(11.8)	—	—	(11.8)	—	(11.8)
Repurchases of common stock	(0.5)	—	—	—	(100.0)	(100.0)	—	(100.0)
Stock-based compensation expense	—	—	30.5	—	—	30.5	—	30.5
Contribution from owners of noncontrolling interest	—	—	—	—	—	—	0.2	0.2
Balance at December 31, 2017	62.9	0.6	3,368.1	(129.1)	1,440.1	4,679.7	2.8	4,682.5
Consolidated net earnings	—	—	—	—	470.0	470.0	0.4	470.4
Other comprehensive loss	—	—	—	(14.5)	—	(14.5)	—	(14.5)
Dividends declared ($1.84 per common share)	—	—	—	—	(116.4)	(116.4)	—	(116.4)
Issuances of common stock for stock award plans	0.1	—	14.2	—	—	14.2	—	14.2
Shares withheld for employees' income tax obligations	—	—	(11.9)	—	—	(11.9)	—	(11.9)
Repurchases of common stock	(0.5)	—	—	—	(100.4)	(100.4)	—	(100.4)
Stock-based compensation expense	—	—	29.3	—	—	29.3	—	29.3
Noncontrolling interest acquired in business combination	—	—	—	—	—	—	9.0	9.0
Purchase of the noncontrolling interest in the existing joint venture	—	—	(3.6)	—	—	(3.6)	(9.2)	(12.8)
Balance at December 31, 2018	62.5	0.6	3,396.1	(143.6)	1,693.3	4,946.4	3.0	4,949.4
Consolidated net earnings	**—**	**—**	**—**	**—**	**611.9**	**611.9**	**0.1**	**612.0**
Other comprehensive loss	**—**	**—**	**—**	**(2.2)**	**—**	**(2.2)**	**—**	**(2.2)**
Dividends declared ($2.06 per common share)	**—**	**—**	**—**	**—**	**(129.8)**	**(129.8)**	**—**	**(129.8)**
Issuances of common stock for stock award plans	**0.3**	**—**	**16.7**	**—**	**—**	**16.7**	**—**	**16.7**
Shares withheld for employees' income tax obligations	**—**	**—**	**(28.1)**	**—**	**—**	**(28.1)**	**—**	**(28.1)**
Repurchases of common stock	**(0.4)**	**—**	**—**	**—**	**(98.2)**	**(98.2)**	**—**	**(98.2)**
Stock-based compensation expense	**—**	**—**	**34.1**	**—**	**—**	**34.1**	**—**	**34.1**
Distribution to owners of noncontrolling interest	**—**	**—**	**—**	**—**	**—**	**—**	**(0.6)**	**(0.6)**
Balance at December 31, 2019	**62.4**	**$ 0.6**	**$ 3,418.8**	**$ (145.8)**	**$ 2,077.2**	**$ 5,350.8**	**$ 2.5**	**$ 5,353.3**

The accompanying Notes to the Financial Statements are an integral part of these statements.

Notes to Financial Statements

Note A: Accounting Policies

Organization. Martin Marietta (the "Company") is a natural resource-based building materials company. The Company supplies aggregates (crushed stone, sand and gravel) through its network of more than 300 quarries, mines and distribution yards in 27 states, Canada and the Bahamas. In the western United States, Martin Marietta also provides cement and downstream products, namely, ready mixed concrete, asphalt and paving services, in markets where the Company also has a leading aggregates position. Specifically, the Company has two cement plants and several cement distribution facilities in Texas and Louisiana, and 141 ready mixed concrete plants and seven asphalt plants in Texas, Colorado, Louisiana, Arkansas and Wyoming. Paving services are exclusively in Colorado. The Company's heavy-side building materials are used in infrastructure, nonresidential and residential construction projects. Aggregates are also used in agricultural, utility and environmental applications and as railroad ballast. The aggregates, cement, ready mixed concrete and asphalt and paving product lines are reported collectively as the "Building Materials" business. As of December 31, 2019, the Building Materials business contains the following reportable segments: Mid-America Group, Southeast Group and West Group. The Mid-America Group operates in Indiana, Iowa, northern Kansas, Kentucky, Maryland, Minnesota, Missouri, eastern Nebraska, North Carolina, Ohio, Pennsylvania, South Carolina, Virginia, Washington and West Virginia. The Southeast Group has operations in Alabama, Florida, Georgia, southwestern South Carolina, Tennessee, Nova Scotia and the Bahamas. The West Group operates in Arkansas, Colorado, southern Kansas, Louisiana, western Nebraska, Nevada, Oklahoma, Texas, Utah and Wyoming. In addition to these operations, the Company sells to customers in New York, Delaware, New Mexico and Mississippi. The following states accounted for 72% of the Building Materials business' 2019 total products and services revenues: Texas, Colorado, North Carolina, Georgia and Iowa.

The Company also operates a Magnesia Specialties business, which produces magnesia-based chemical products used in industrial, agricultural and environmental applications, and dolomitic lime sold primarily to customers in the steel and mining industries. Magnesia Specialties' production facilities are located in Ohio and Michigan, and products are shipped to customers worldwide.

Basis of Presentation and Use of Estimates. The Company's consolidated financial statements are presented in conformity with accounting principles generally accepted in the United States (U.S. GAAP), which requires management to make certain estimates and assumptions about future events. These estimates and the underlying assumptions affect the amounts of assets and liabilities reported, disclosures about contingent assets and liabilities and reported amounts of revenues and expenses. Such estimates include the valuation of accounts receivable, inventories, goodwill, intangible assets and other long-lived assets and assumptions used in the calculation of income tax expense (benefit), retirement and other postemployment benefits, stock-based compensation, the allocation of the purchase price to the fair values of assets acquired and liabilities assumed as part of business combinations and revenue recognition for service contracts. These estimates and assumptions are based on management's judgment. Management evaluates estimates and assumptions on an ongoing basis using historical experience and other factors, including the current economic environment, and adjusts such estimates and assumptions when facts and circumstances dictate. Changes in credit, equity and energy markets and changes in construction activity increase the uncertainty inherent in certain estimates and assumptions. As future events and their effects cannot be determined with precision, actual results could differ significantly from estimates. Changes in estimates, including those resulting from continuing changes in the economic environment, are reflected in the consolidated financial statements for the period in which the change in estimate occurs.

During the year ended December 31, 2019, the Company identified a prior-period error that overstated its earnings from a nonconsolidated equity affiliate. The overstatement was not deemed material to the current period or any previously reported periods and was therefore corrected as an out-of-period expense of $15.7 million. The pretax noncash adjustment is recorded in other nonoperating expenses, consistent with the recurring classification of equity earnings from the nonconsolidated affiliate.

Basis of Consolidation. The consolidated financial statements include the accounts of the Company and its wholly-owned and majority-owned subsidiaries. Partially-owned affiliates are either consolidated or accounted for at cost or as equity investments, depending on the level of ownership interest or the Company's ability to exercise control over the affiliates' operations. Intercompany balances and transactions between subsidiaries have been eliminated in consolidation.

Revenue Recognition. Total revenues include sales of products and services provided to customers, net of discounts or allowances, if any, and include freight and delivery costs billed to customers. Revenues for product sales are recognized when control of the promised good is transferred to unaffiliated customers, typically when finished products are shipped. Revenues derived from the paving business are recognized using the percentage-of-completion method under the cost-to-cost approach. Under the cost-to-cost approach, recognized contract revenue is determined by multiplying the total estimated contract revenue by the estimated percentage of completion. Contract costs are recognized as incurred. The percentage of completion is determined on a contract-by-contract basis using project costs incurred to date as a percentage of total estimated project costs. The Company believes the cost-to-cost approach is appropriate, as the use of asphalt in a paving contract is relatively consistent with the performance of the related paving services. Paving contracts, notably with governmental entities, may contain performance bonuses based on quality specifications. Given the uncertainty of meeting the criteria until the performance obligation is completed, performance bonuses are recognized as revenues when and if determined to be achieved. Performance bonuses were not material to the Company's consolidated results of operations for the years ended December 31, 2019, 2018 and 2017. Freight revenues reflect delivery arranged by the Company using a third party on behalf of the customer and are recognized consistently with the timing of the product revenues.

Freight and Delivery Costs. Freight and delivery costs represent pass-through transportation costs incurred and paid by the Company to third-party carriers to deliver products to customers. These costs are then billed to the customers.

Cash and Cash Equivalents. Cash equivalents are comprised of highly-liquid instruments with original maturities of three months or less from the date of purchase. The Company manages its cash and cash equivalents to ensure short-term operating cash needs are met and excess funds are managed efficiently. When operating cash is not sufficient to meet current needs, the Company borrows money under its credit facilities. The Company utilizes excess cash to either pay down credit facility borrowings or invest in money market funds, money market demand deposit accounts or offshore time deposit accounts. Money market demand deposits and offshore time deposit accounts are exposed to bank solvency risk.

Accounts Receivable. Accounts receivable are stated at cost. The Company does not typically charge interest on customer accounts receivable. The Company records an allowance for doubtful accounts, which includes a provision for probable losses based on historical write-offs and a specific reserve for accounts deemed at risk. The Company writes-off accounts receivable when it becomes probable, based upon customer facts and circumstances, that such amounts will not be collected.

Inventories Valuation. Inventories are stated at the lower of cost or net realizable value. Costs for finished products and in process inventories are determined by the first-in, first-out method. Carrying value for parts and supplies are determined by the weighted-average cost method. The Company records an allowance for finished product inventories based on an analysis of inventory on hand in excess of historical sales for a twelve-month or five-year average period and future demand. The Company also establishes an allowance for parts over five years old and supplies over one year old.

Post-production stripping costs, which represent costs of removing overburden and waste materials to access mineral deposits, are a component of inventory production costs and recognized as incurred.

Property, Plant and Equipment. Property, plant and equipment are stated at cost.

The estimated service lives for property, plant and equipment are as follows:

Class of Assets	Range of Service Lives
Buildings	5 to 20 years
Machinery & Equipment	2 to 20 years
Land Improvements	5 to 60 years

The Company begins capitalizing quarry development costs at a point when reserves are determined to be proven or probable, economically mineable and when demand supports investment in the market. Capitalization of these costs ceases when production commences. Capitalized quarry development costs are classified as land improvements and depreciated over the life of the reserves.

The Company reviews relevant facts and circumstances to determine whether to capitalize or expense pre-production stripping costs when additional pits are developed at an existing quarry. If the additional pit operates in a separate and distinct area of the quarry, these costs are capitalized as quarry development costs and depreciated over the life of the uncovered reserves. Additionally, a separate asset retirement obligation is created for additional pits when the liability is incurred. Once a pit enters the production phase, all post-production stripping costs are charged to inventory production costs as incurred.

Mineral reserves and mineral interests acquired in connection with a business combination are valued using an income approach over the life of the reserves.

Depreciation is computed based on estimated service lives using the straight-line method. Depletion of mineral reserves is calculated based on proven and probable reserves using the units-of-production method on a quarry-by-quarry basis.

Property, plant and equipment are reviewed for impairment whenever facts and circumstances indicate that the carrying amount of an asset group may not be recoverable. An impairment loss is recognized if expected future undiscounted cash flows over the estimated remaining service life of the related asset are less than the asset's carrying value.

Repair and Maintenance Costs. Repair and maintenance costs that do not substantially extend the life of the Company's plant and equipment are expensed as incurred.

Leases. Effective January 1, 2019, if the Company determines a contract is or contains a lease at inception of the agreement, the Company records right-of-use (ROU) assets, which represent the Company's right to use an underlying leased asset, and lease liabilities, which represent the Company's obligation to make lease payments arising from the lease, on the consolidated balance sheet at the present value of the future lease payments over the lease term at commencement date. The Company determines the present value of lease payments based on the implicit rate, which may be explicitly stated in the lease, if available, or may be the Company's estimated collateralized incremental borrowing rate based on the term of the lease. Initial ROU assets also include any lease payments made at or before commencement date and any initial direct costs incurred and exclude lease incentives. Certain of the Company's leases contain renewal and/or termination options. The Company recognizes renewal or termination options as part of its ROU assets and lease liabilities when the Company has the unilateral right to renew or terminate and it is reasonably certain these options will be exercised.

Some leases require the Company pay non-lease components, which may include taxes, maintenance, insurance and certain other expenses applicable to the leased property, and are primarily considered variable costs. The Company accounts for lease and non-lease components as a single amount, with the exception of railcar and fleet vehicle leases, for which the Company separately accounts for the lease and non-lease components.

Leases are evaluated and determined to be operating or finance leases. If a lease transfers ownership to the underlying asset by the end of the lease term; includes a purchase option that is reasonably certain to be exercised; has a lease term for the major part of the remaining economic life of the underlying asset; has a present value of the sum of the lease payments that equals or exceeds substantially all of the fair value of the underlying asset; is for an underlying asset that is of a specialized nature and is expected to have no alternative use to the lessor at the end of the lease term, the lease is a finance lease. If none of these terms exist, the lease is an operating lease.

As allowed by Accounting Standards Codification 842, *Leases* (ASC 842), leases with an initial lease term of one year or less are not recorded on the balance sheet. Costs for these leases are expensed as incurred.

In the consolidated statements of earnings, operating lease expense, which is recognized on a straight-line basis over the lease term, and the amortization of finance lease ROU assets are included in cost of revenues or selling, general and administrative expenses. Accretion on the liabilities for finance leases is included in interest expense.

Goodwill and Intangible Assets. Goodwill represents the excess purchase price paid for acquired businesses over the estimated fair value of identifiable assets and liabilities. Other intangibles represent amounts assigned principally to contractual agreements and are amortized ratably over periods based on related contractual terms. If an intangible asset is deemed to have an indefinite life, it is not amortized.

The Company's reporting units, which represent the level at which goodwill is tested for impairment, are based on the operating segments of the Building Materials business. Goodwill is assigned to the respective reporting unit(s) based on the location of acquisitions at the time of consummation. Goodwill is tested for impairment by comparing each reporting unit's fair value to its carrying value, which represents a Step 1 approach. However, prior to Step 1, the Company may perform an optional qualitative assessment and evaluate macroeconomic conditions, industry and market conditions, cost factors, overall financial performance and other business or reporting unit-specific events. If the Company concludes it is more-likely-than-not (i.e., a likelihood of more than 50%) that a reporting unit's fair value is higher than its carrying value, the Company does not perform any further goodwill impairment testing for that reporting unit. Otherwise, the Company proceeds to Step 1 of its goodwill impairment analysis. The Company may bypass the qualitative assessment for any reporting unit in any period and proceed directly with the quantitative calculation in Step 1. If the reporting unit's fair value exceeds its carrying value, no further calculation is necessary. A reporting unit with a carrying value in excess of its fair value constitutes a Step 1 failure and will lead to an impairment charge.

The carrying values of goodwill and other indefinite-lived intangible assets are reviewed annually, as of October 1, for impairment. An interim review is performed between annual tests if facts and circumstances indicate potential impairment. The carrying value of other amortizable intangibles is reviewed if facts and circumstances indicate potential impairment. If a review indicates the carrying value is impaired, a charge is recorded.

Retirement Plans and Postretirement Benefits. The Company sponsors defined benefit retirement plans and also provides other postretirement benefits. The Company recognizes the funded status, defined as the difference between the fair value of plan assets and the benefit obligation, of its pension plans and other postretirement benefits as an asset or liability on the consolidated balance sheets. Actuarial gains or losses that arise during the year are recognized as a component of accumulated other comprehensive earnings or loss. Those amounts are amortized over the participants' average remaining service period and recognized as a component of net periodic benefit cost. The amount amortized is determined using a corridor approach and represents the excess over 10% of the greater of the projected benefit obligation or pension
plan assets.

Insurance Reserves. The Company has insurance coverage with large deductibles for workers' compensation, automobile liability, marine liability and general liability claims, and is also self-insured for health claims. The Company records insurance reserves based on an actuarial-determined analysis, which calculates development factors that are applied to total case reserves within the insurance programs. While the Company believes the assumptions used to calculate these liabilities are appropriate, significant differences in actual experience and/or significant changes in these assumptions may materially affect insurance costs.

Stock-Based Compensation. The Company has stock-based compensation plans for employees and its Board of Directors. The Company recognizes all forms of stock-based awards that vest as compensation expense. The compensation expense is the fair value of the awards at the measurement date and is recognized over the requisite service period. Forfeitures are recognized as they occur.

The fair value of restricted stock awards, incentive compensation stock awards and Board of Directors' fees paid in the form of common stock are based on the closing price of the Company's common stock on the awards' respective grant dates. The fair value of performance stock awards as of the grant dates is determined by a Monte Carlo simulation methodology.

In 2019, 2018 and 2017, the Company did not issue any stock options. For stock options issued prior to 2016, the Company used the accelerated expense recognition method. The accelerated recognition method requires stock options that vest ratably to be divided into tranches. The expense for each tranche is allocated to its particular vesting period.

Environmental Matters. The Company records a liability for an asset retirement obligation at fair value in the period in which it is incurred. The asset retirement obligation is recorded at the acquisition date of a long-lived tangible asset if the fair value can be reasonably estimated. A corresponding amount is capitalized as part of the asset's carrying amount. The fair value is affected by management's assumptions regarding the scope of the work required, inflation rates and quarry closure dates.

Further, the Company records an accrual for other environmental remediation liabilities in the period in which it is probable that a liability has been incurred and the appropriate amounts can be estimated reasonably. Such accruals are adjusted as further information develops or circumstances change. Generally, these costs are not discounted to their present value or offset for potential insurance or other claims or potential gains from future alternative uses for a site.

Income Taxes. Deferred income taxes, net, on the consolidated balance sheets reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, net of valuation allowances. The effect on deferred income tax assets and liabilities attributable to changes in enacted tax rates are charged or credited to income tax expense or benefit in the period of enactment.

Uncertain Tax Positions. The Company recognizes a tax benefit when it is more-likely-than-not, based on the technical merits, that a tax position would be sustained upon examination by a taxing authority. The amount to be recognized is measured as the largest amount of tax benefit that is greater than 50% likely of being realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. The Company's unrecognized tax benefits are recorded in other liabilities on the consolidated balance sheets or as an offset to the deferred tax asset for tax carryforwards
where available.

The Company records interest accrued in relation to unrecognized tax benefits as income tax expense. Penalties, if incurred, are recorded as operating expenses in the consolidated statements of earnings.

Sales Taxes. Sales taxes collected from customers are recorded as liabilities until remitted to taxing authorities and therefore are not reflected in the consolidated statements of earnings.

Start-Up Costs. Noncapital start-up costs for new facilities and products are charged to operations as incurred.

Warranties. The Company's construction contracts usually contain warranty provisions covering defects in materials, design or workmanship, the majority of which cover one year after project completion. Due to the nature of its projects, including contract owner inspections of the work both during construction and prior to acceptance, the Company has not experienced material warranty costs for these short-term warranties and therefore does not believe an accrual for these costs is necessary. The ready mixed concrete product line carries a longer warranty period, for which the Company has accrued an estimate of warranty cost based on experience with the type of work and any known risks relative to the projects. These costs were not material to the Company's consolidated results of operations for the years ended December 31, 2019, 2018 and 2017.

Consolidated Comprehensive Earnings and Accumulated Other Comprehensive Loss Consolidated comprehensive earnings for the Company consist of consolidated net earnings, adjustments for the funded status of pension and postretirement benefit plans, foreign currency translation adjustments and the amortization of the value of terminated forward starting interest rate swap agreements into interest expense, and are presented in the Company's consolidated statements of comprehensive earnings.

Accumulated other comprehensive loss consists of unrecognized gains and losses related to the funded status of the pension and postretirement benefit plans, foreign currency translation and the unamortized value of terminated forward starting interest rate swap agreements, and is presented on the Company's consolidated balance sheets.

The components of the changes in accumulated other comprehensive loss and related cumulative noncurrent deferred tax assets are as follows:

years ended December 31 (in millions)	Pension and Postretirement Benefit Plans	Foreign Currency	Unamortized Value of Terminated Forward Starting Interest Rate Swap	Total
		2019		
Accumulated other comprehensive loss at beginning of period	**$ (141.5)**	**$ (2.1)**	**$ —**	**$ (143.6)**
Other comprehensive (loss) earnings before reclassifications, net of tax	**(14.5)**	**1.2**	**—**	**(13.3)**
Amounts reclassified from accumulated other comprehensive loss, net of tax	**11.1**	**—**	**—**	**11.1**
Other comprehensive (loss) earnings, net of tax	**(3.4)**	**1.2**	**—**	**(2.2)**
Accumulated other comprehensive loss at end of period	**$ (144.9)**	**$ (0.9)**	**$ —**	**$ (145.8)**
Cumulative noncurrent deferred tax assets at end of period	**$ 85.2**	**$ —**	**$ —**	**$ 85.2**
		2018		
Accumulated other comprehensive loss at beginning of period	$ (128.8)	$ —	$ (0.3)	$ (129.1)
Other comprehensive loss before reclassifications, net of tax	(22.9)	(2.1)	—	(25.0)
Amounts reclassified from accumulated other comprehensive loss, net of tax	10.2	—	0.3	10.5
Other comprehensive (loss) earnings, net of tax	(12.7)	(2.1)	0.3	(14.5)
Accumulated other comprehensive loss at end of period	$ (141.5)	$ (2.1)	$ —	$ (143.6)
Cumulative noncurrent deferred tax assets at end of period	$ 84.2	$ —	$ —	$ 84.2
		2017		
Accumulated other comprehensive loss at beginning of period	$ (128.4)	$ (1.2)	$ (1.1)	$ (130.7)
Other comprehensive (loss) earnings before reclassifications, net of tax	(8.1)	1.2	—	(6.9)
Amounts reclassified from accumulated other comprehensive loss, net of tax	7.7	—	0.8	8.5
Other comprehensive (loss) earnings, net of tax	(0.4)	1.2	0.8	1.6
Accumulated other comprehensive loss at end of period	$ (128.8)	$ —	$ (0.3)	$ (129.1)
Cumulative noncurrent deferred tax assets at end of period	$ 79.9	$ —	$ 0.2	$ 80.1

Reclassifications out of accumulated other comprehensive loss are as follows:

years ended December 31 (in millions)	**2019**	2018	2017	**Affected line items in the consolidated statements of earnings**
Pension and postretirement benefit plans:				
Settlement charge	**$ —**	$ 2.9	$ —	
Amortization of:				
Prior service credit	**(0.8)**	(2.0)	(1.4)	
Actuarial loss	**15.5**	12.7	13.8	
	14.7	13.6	12.4	Other nonoperating expenses and (income), net
Tax effect	**(3.6)**	(3.4)	(4.7)	Income tax expense (benefit)
Total	**$ 11.1**	$ 10.2	$ 7.7	
Unamortized value of terminated forward starting interest rate swap:				
Additional interest expense	**$ —**	$ 0.5	$ 1.4	Interest expense
Tax effect	**—**	(0.2)	(0.6)	Income tax expense (benefit)
Total	**$ —**	$ 0.3	$ 0.8	

Earnings Per Common Share. The Company computes earnings per common share (EPS) pursuant to the two-class method. The two-class method determines EPS for each class of common stock and participating securities according to dividends or dividend equivalents and their respective participation rights in undistributed earnings. The Company paid nonforfeitable dividend equivalents during the vesting period on its restricted stock awards and incentive stock awards made prior to 2016, which results in these being considered participating securities.

The numerator for basic and diluted earnings per common share is net earnings attributable to Martin Marietta, reduced by dividends and undistributed earnings attributable to the Company's unvested restricted stock awards and incentive stock awards issued prior to 2016. The denominator for basic earnings per common share is the weighted-average number of common shares outstanding during the period. Diluted earnings per common share is computed assuming that the weighted-average number of common shares is increased by the conversion, using the treasury stock method, of awards issued to employees and nonemployee members of the Company's Board of Directors under certain stock-based compensation arrangements if the conversion is dilutive.

The following table reconciles the numerator and denominator for basic and diluted earnings per common share:

years ended December 31 (in millions)	**2019**	2018	2017
Net earnings attributable to Martin Marietta	**$ 611.9**	$ 470.0	$ 713.3
Less: Distributed and undistributed earnings attributable to unvested participating securities	**0.9**	0.8	2.0
Basic and diluted net earnings attributable to common shareholders attributable to Martin Marietta	**$ 611.0**	$ 469.2	$ 711.3
Basic weighted-average common shares outstanding	**62.5**	62.9	62.9
Effect of dilutive employee and director awards	**0.2**	0.2	0.3
Diluted weighted-average common shares outstanding	**62.7**	63.1	63.2

Reclassifications. Certain reclassifications were made to the comparative years' financial statements and notes to the financial statements to conform to the December 31, 2019 presentation. Such reclassifications had no impact on the Company's previously reported results of operations, financial position or cash flows.

New Accounting Pronouncements

Leases

Effective January 1, 2019, the Company adopted ASC 842, which applies to virtually all leases, excluding mineral interest royalty agreements. ASC 842 requires the modified retrospective transition approach, applying the new standard to all leases existing at the date of initial application. It further states that an entity may use either 1) its effective date or 2) the beginning of the earliest comparative period presented in the financial statements as its date of initial application. The Company used the effective date as the date of initial application. As such, financial information and disclosures required under ASC 842 are not provided for dates and periods prior to January 1, 2019.

The lease standard provides a number of practical expedients for transition accounting. The Company elected the "package of practical expedients", which permitted the Company to not reassess its prior conclusions about lease identification, lease classification and initial direct costs. The Company elected the practical expedients pertaining to the use of hindsight and to land easements. Applying the hindsight practical expedient resulted in longer lease terms for many leases.

The adoption of ASC 842 resulted in the recognition of ROU assets and lease liabilities of $ 502.5 million and $501.6 million, respectively, for operating leases and $10.9 million and $12.1 million, respectively, for finance leases. The adoption did not have a material impact on the Company's consolidated statement of earnings or consolidated statement of cash flows.

Pending Accounting Pronouncements

Credit Losses

In June 2016, the Financial Accounting Standards Board issued Accounting Standards Update (ASU) 2016-13, *Financial Instruments – Credit Losses* ("ASU 2016-13"), which is effective and will be adopted January 1, 2020. ASU 2016-13 includes a current expected credit loss (CECL) model that requires an entity to estimate credit losses expected over the life of an exposure or pool of exposures based on historical information, current information and reasonable and supportable forecasts at the time the asset is recognized and is remeasured at each reporting period. ASU 2016-13 primarily relates to the Company's receivables, but the scope also includes retainage and contract assets related to its paving business. The Company has evaluated ASU 2016-13, and the adoption will not have a material impact on its financial position or consolidated statement of earnings and comprehensive earnings.

Note B: Revenue Recognition

Performance Obligations. Performance obligations are contractual promises to transfer or provide a distinct good or service for a stated price. The Company's product sales agreements are single-performance obligations that are satisfied at a point in time. Performance obligations within paving service agreements are satisfied over time, primarily ranging from one day to two years. For product revenues and freight revenues, customer payment terms are generally 30 days from invoice date. Customer payments for the paving operations are based on a contractual billing schedule and are due 30 days from invoice date.

Future revenues from unsatisfied performance obligations at December 31, 2019, 2018 and 2017 were $ 136.1 million, $78.1 million and $67.0 million, respectively, where the remaining periods to complete these obligations ranged from three months to 12 months, two months to 22 months and one month to 23 months, respectively.

Sales Taxes. The Company is deemed to be an agent when collecting sales taxes from customers. Sales taxes collected are initially recorded as liabilities until remitted to taxing authorities and are not reflected in the consolidated statements of earnings as revenues and expenses.

Revenue by Category. The following table presents the Company's total revenues by category for each reportable segment:

years ended December 31 (in millions)	Products and Services		Freight		Total	
			2019			
Mid-America Group	**$**	**1,328.8**	**$**	**117.2**	**$**	**1,446.0**
Southeast Group		**489.1**		**17.3**		**506.4**
West Group		**2,354.5**		**160.9**		**2,515.4**
Total Building Materials Business		**4,172.4**		**295.4**		**4,467.8**
Magnesia Specialties		**249.9**		**21.4**		**271.3**
Total	**$**	**4,422.3**	**$**	**316.8**	**$**	**4,739.1**
			2018			
Mid-America Group	$	1,133.8	$	89.4	$	1,223.2
Southeast Group		409.6		13.8		423.4
West Group		2,168.4		141.6		2,310.0
Total Building Materials Business		3,711.8		244.8		3,956.6
Magnesia Specialties		268.6		19.1		287.7
Total	$	3,980.4	$	263.9	$	4,244.3
			2017			
Mid-America Group	$	982.2	$	71.1	$	1,053.3
Southeast Group		348.7		13.9		362.6
West Group		2,139.9		139.8		2,279.7
Total Building Materials Business		3,470.8		224.8		3,695.6
Magnesia Specialties		252.7		17.3		270.0
Total	$	3,723.5	$	242.1	$	3,965.6

Service revenues, which solely include the paving operations located in Colorado, were $250.6 million, $219.6 million and $245.3 million for the years ended December 31, 2019, 2018 and 2017, respectively.

Contract Balances. Costs in excess of billings relate to the conditional right to consideration for completed contractual performance and are contract assets on the consolidated balance sheets. Costs in excess of billings are reclassified to accounts receivable when the right to consideration becomes unconditional. Billings in excess of costs relate to customers invoiced in advance of contractual performance and are contract liabilities on the consolidated balance sheets. The following table presents information about the Company's contract balances:

December 31 (in millions)	2019		2018	
Costs in excess of billings	**$**	**2.8**	$	2.0
Billings in excess of costs	**$**	**7.8**	$	6.7

Revenues recognized from the beginning balance of contract liabilities for the years ended December 31, 2019 and 2018 were $6.6 million and $6.8 million, respectively.

Retainage, which primarily relates to the paving services, represents amounts that have been billed to customers but payment withheld until final acceptance of the performance obligation by the customer. Included on the Company's consolidated balance sheets, retainage was $10.2 million and $7.5 million at December 31, 2019 and 2018, respectively.

Policy Elections. When the Company arranges third-party freight to deliver products to customers, the Company has elected the delivery to be a fulfillment activity rather than a separate performance obligation. Further, the Company acts as a principal in the delivery arrangements and, as required by the revenue standard, the related revenues and costs are presented gross and are included in the consolidated statements of earnings.

Note C: Goodwill and Other Intangible Assets

The following table shows the changes in goodwill by reportable segment and in total:

December 31 (in millions)	Mid-America Group	Southeast Group	West Group	Total
		2019		
Balance at beginning of period	**$ 431.9**	**$ 144.2**	**$ 1,823.0**	**$ 2,399.1**
Measurement period adjustments	**(1.0)**	**(0.6)**	**—**	**(1.6)**
Goodwill allocated to assets held for sale	**—**	**(0.2)**	**—**	**(0.2)**
Divestitures	**—**	**—**	**(0.5)**	**(0.5)**
Balance at end of period	**$ 430.9**	**$ 143.4**	**$ 1,822.5**	**$ 2,396.8**
		2018		
Balance at beginning of period	$ 281.4	$ 50.3	$ 1,828.6	$ 2,160.3
Acquisitions	150.5	94.8	—	245.3
Goodwill allocated to assets held for sale	—	—	(5.6)	(5.6)
Divestitures	—	(0.9)	—	(0.9)
Balance at end of period	$ 431.9	$ 144.2	$ 1,823.0	$ 2,399.1

Intangible assets subject to amortization consist of the following:

December 31 (in millions)	Gross Amount	Accumulated Amortization	Net Balance
		2019	
Noncompetition agreements	**$ 6.3**	**$ (6.2)**	**$ 0.1**
Customer relationships	**65.6**	**(30.4)**	**35.2**
Operating permits	**459.0**	**(42.3)**	**416.7**
Use rights and other	**16.7**	**(12.1)**	**4.6**
Trade names	**12.8**	**(10.9)**	**1.9**
Total	**$ 560.4**	**$ (101.9)**	**$ 458.5**
		2018	
Noncompetition agreements	$ 6.3	$ (6.2)	$ 0.1
Customer relationships	65.6	(25.6)	40.0
Operating permits	459.0	(36.1)	422.9
Use rights and other	16.7	(11.2)	5.5
Trade names	12.8	(9.7)	3.1
Total	$ 560.4	$ (88.8)	$ 471.6

Intangible assets deemed to have an indefinite life that are therefore not amortized consist of the following:

December 31	Building Materials Business		Magnesia Specialties		Total	
(in millions)	**2019**					
Operating permits	**$**	**6.6**	**$**	**—**	**$**	**6.6**
Use rights		**19.0**		**—**		**19.0**
Trade names		**0.2**		**2.5**		**2.7**
Total	**$**	**25.8**	**$**	**2.5**	**$**	**28.3**
	2018					
Operating permits	$	6.6	$	—	$	6.6
Use rights		20.3		—		20.3
Trade names		0.3		2.5		2.8
Total	$	27.2	$	2.5	$	29.7

During 2019, the Company acquired $1.5 million of intangible assets, consisting of use rights not subject to amortization.

Total amortization expense for intangible assets for the years ended December 31, 2019, 2018 and 2017 was $ 13.0 million, $13.9 million and $14.2 million, respectively.

The estimated amortization expense for intangible assets for each of the next five years and thereafter is as follows:

(in millions)		
2020	$	13.2
2021		12.5
2022		11.1
2023		10.6
2024		10.6
Thereafter		400.5
Total	$	458.5

Note D: Business Combinations

In April 2018, the Company acquired Bluegrass Materials Company ("Bluegrass"), the then-largest privately-held, pure-play aggregates company in the United States, for $1.6 billion. Bluegrass' operations included 22 active sites with more than 125 years of reserves, collectively, in Georgia, South Carolina, Tennessee, Maryland, Kentucky and Pennsylvania. These operations complement the Company's existing southeastern footprint in its Mid-America and Southeast Groups and provide a new growth platform within Maryland and Kentucky.

The Company determined fair values of the assets acquired and liabilities assumed. As of April 2019, the measurement period is closed. The following is a summary of the estimated fair values of the assets acquired and the liabilities assumed as of the acquisition date:

(in millions)		
Assets:		
Cash and cash equivalents	$	1.2
Receivables		25.5
Inventory		46.6
Other current assets		1.0
Property, plant and equipment		1,519.3
Intangible assets, other than goodwill		20.2
Goodwill		243.0
Total Assets		1,856.8
Liabilities:		
Accounts payable and accrued expenses		17.9
Deferred income tax liabilities, net		212.5
Noncontrolling interest		9.0
Total Liabilities		239.4
Total Consideration	$	1,617.4

Goodwill represents the excess purchase price over the fair values of assets acquired and liabilities assumed and reflects projected operating synergies from the transaction, including expected overhead savings. None of the goodwill generated by the transaction will be deductible for income tax purposes.

Total revenues and earnings from operations attributable to acquired operations included in the consolidated statements of earnings were $ 245.7 million and $70.5 million, respectively, for the year ended December 31, 2019, and $ 172.0 million and $32.4 million, respectively, for the year ended December 31, 2018.

Acquisition-related expenses, primarily related to Bluegrass, were $ 28.3 million and $8.6 million for the years ended December 31, 2018 and 2017, respectively. Acquisition-related expenses, net, for 2018 also include a $14.8 million gain on a required divestiture of a legacy quarry.

Unaudited Pro Forma Financial Information

The unaudited pro forma financial information summarizes the combined results of operations for the Company and Bluegrass as though the companies were combined as of January 1, 2017. Financial information for periods prior to the April 2018 acquisition date included in the pro forma earnings does not reflect any cost savings or associated costs to achieve such savings from operating efficiencies or synergies that result from the combination. Consistent with the assumed acquisition date of January 1, 2017, the pro forma financial results for the year ended December 31, 2017 include acquisition-related expenses of $28.1 million, the $14.8 million gain on the required divestiture of assets and the one-time $ 18.7 million increase in cost of revenues for the sale of acquired inventory marked up to fair value as part of acquisition accounting.

The pro forma information does not purport to project the future financial position or operating results of the combined company. The pro forma financial information as presented below is for informational purposes only and is not indicative of the results of operations that would have been achieved if the acquisition had taken place at the beginning of fiscal year 2017.

years ended December 31 (in millions, except for per share data)		2018		2017
Total revenues	$	4,299.7	$	4,178.6
Net earnings attributable to Martin Marietta	$	489.5	$	691.7
Diluted earnings per share	$	7.75	$	10.94

In August 2018, the Company purchased the remaining noncontrolling interest in a consolidated joint venture where the controlling interest was acquired as part of the Bluegrass acquisition.

Note E: Accounts Receivable, Net

December 31 (in millions)		2019		2018
Customer receivables	**$**	**564.4**	$	514.1
Other current receivables		**14.0**		12.5
		578.4		526.6
Less: Allowances		**(4.7)**		(3.3)
Total	**$**	**573.7**	$	523.3

Of the total accounts receivable, net, balances, $2.9 million and $2.5 million at December 31, 2019 and 2018, respectively, were due from unconsolidated affiliates.

Note F: Inventories, Net

December 31 (in millions)		2019		2018
Finished products	**$**	**643.6**	$	615.7
Products in process		**41.9**		35.6
Raw materials		**32.4**		31.3
Supplies and expendable parts		**141.5**		139.6
		859.4		822.2
Less: Allowances		**(168.6)**		(159.2)
Total	**$**	**690.8**	$	663.0

Note G: Property, Plant and Equipment, Net

December 31 (in millions)		2019		2018
Land and land improvements	**$**	**1,135.0**	$	1,089.6
Mineral reserves and interests		**2,509.8**		2,506.8
Buildings		**163.4**		162.1
Machinery and equipment		**4,548.6**		4,357.7
Construction in progress		**258.4**		178.7
Finance lease right-of-use assets		**18.3**		—
		8,633.5		8,294.9
Less: Accumulated depreciation, depletion and amortization		**(3,427.5)**		(3,137.7)
Total	**$**	**5,206.0**	$	5,157.2

Depreciation, depletion and amortization expense related to property, plant and equipment was $ 354.4 million, $326.1 million and $279.8 million for the years ended December 31, 2019, 2018 and 2017, respectively. Depreciation, depletion and amortization expense for 2019 includes amortization of right-of-use assets from finance leases and for 2018 and 2017 includes amortization of machinery and equipment under capital leases.

Interest expense of $5.1 million, $3.0 million and $3.6 million was capitalized during 2019, 2018 and 2017, respectively.

At December 31, 2019 and 2018, $49.7 million and $56.2 million, respectively, of the Building Materials business' property, plant and equipment, net, were located in foreign countries, namely the Bahamas and Canada.

Note H: Long-Term Debt

December 31 (in millions)	2019	2018
4.25% Senior Notes, due 2024	**$ 397.0**	$ 396.4
7% Debentures, due 2025	**124.4**	124.3
3.450% Senior Notes, due 2027	**297.3**	296.9
3.500% Senior Notes, due 2027	**495.3**	494.8
6.25% Senior Notes, due 2037	**228.1**	228.1
4.250% Senior Notes, due 2047	**591.7**	591.5
Floating Rate Senior Notes, due 2020, interest rate of 2.55% and 3.30% at December 31, 2019 and 2018, respectively	**299.7**	299.0
Floating Rate Senior Notes, due 2019, interest rate of 3.29% at December 31, 2018	**—**	299.2
Trade Receivable Facility, interest rate of 2.42% and 3.07% at December 31, 2019 and 2018, respectively	**340.0**	390.0
Other notes	**0.1**	0.2
Total	**2,773.6**	3,120.4
Less: current maturities	**(340.0)**	(390.0)
Long-term debt	**$ 2,433.6**	$ 2,730.4

The Company's 4.25% Senior Notes due 2024, 7% Debentures due 2025, 3.450% Senior Notes due 2027, 3.500% Senior Notes due 2027, 6.25% Senior Notes due 2037, 4.250% Senior Notes due 2047 and Floating Rate Senior Notes due 2020 (collectively, the "Senior Notes") are senior unsecured obligations of the Company, ranking equal in right of payment with the Company's existing and future unsubordinated indebtedness. Upon a change-of-control repurchase event and a resulting below-investment-grade credit rating, the Company would be required to make an offer to repurchase all outstanding Senior Notes, with the exception of the 7% Debentures due 2025, at a price in cash equal to 101% of the principal amount of the Senior Notes, plus any accrued and unpaid interest.

The Senior Notes are carried net of original issue discount, which is being amortized by the effective interest method over the life of the issue. With the exception of the Floating Rate Senior Notes, due 2020, the Senior Notes are redeemable prior to their respective maturity dates at a make-whole redemption price. The principal amount, effective interest rate and maturity date for the Senior Notes are as follows:

	Principal Amount (in millions)	Effective Interest Rate	Maturity Date
4.25% Senior Notes	$ 400.0	4.25%	July 2, 2024
7% Debentures	$ 125.0	7.12%	December 1, 2025
3.450% Senior Notes	$ 300.0	3.47%	June 1, 2027
3.500% Senior Notes	$ 500.0	3.53%	December 15, 2027
6.25% Senior Notes	$ 230.0	6.45%	May 1, 2037
4.250% Senior Notes	$ 600.0	4.27%	December 15, 2047
Floating Rate Senior Notes, due 2020	$ 300.0	Three-month LIBOR + 0.65%	May 22, 2020

The Company has a credit agreement with JPMorgan Chase Bank, N.A., as Administrative Agent, Truist Bank, as successor by merger to SunTrust Bank and formerly known as Branch Banking and Trust Company (BB&T), Deutsche Bank Securities, Inc., and Wells Fargo Bank, N.A., as Co-Syndication Agents, and the lenders party thereto (the "Credit Agreement"), which provides for a $700.0 million five-year senior unsecured revolving facility (the "Revolving Facility"). Borrowings under the Revolving Facility bear interest, at the Company's option, at rates based upon LIBOR or a base rate, plus, for each rate, a margin determined in accordance with a ratings-based pricing grid.

The Credit Agreement requires the Company's ratio of consolidated debt-to-consolidated earnings before interest, taxes, depreciation, depletion and amortization (EBITDA), as defined, for the trailing-twelve months (the "Ratio") to not exceed

3.50x as of the end of any fiscal quarter, provided that the Company may exclude from the Ratio debt incurred in connection with certain acquisitions during the quarter or three preceding quarters so long as the Ratio calculated without such exclusion does not exceed 3.75x. Additionally, if no amounts are outstanding under both the Revolving Facility and the trade receivable securitization facility (discussed later), consolidated debt, including debt for which the Company is a co-borrower (see Note O), may be reduced by the Company's unrestricted cash and cash equivalents in excess of $ 50.0 million, such reduction not to exceed $200.0 million, for purposes of the covenant calculation. The Company was in compliance with the Ratio at December 31, 2019.

On December 5, 2019, the Company extended its Revolving Facility by one year. The Revolving Facility expires on December 5, 2024, with any outstanding principal amounts, together with interest accrued thereon, due in full on that date. Available borrowings under the Revolving Facility are reduced by any outstanding letters of credit issued by the Company under the Revolving Facility. At December 31, 2019 and 2018, the Company had $ 2.3 million of outstanding letters of credit issued under the Revolving Facility and $697.7 million available for borrowing under the Revolving Facility. The Company paid the bank group an upfront loan commitment fee that is being amortized over the life of the Revolving Facility. The Revolving Facility includes an annual facility fee.

The Company, through a wholly-owned special-purpose subsidiary, has a $ 400.0 million trade receivable securitization facility (the "Trade Receivable Facility"). On September 24, 2019, the Company extended the maturity to September 23, 2020. The Trade Receivable Facility, with Truist Bank, Regions Bank, PNC Bank, N.A., The Bank of Tokyo-Mitsubishi UFJ, Ltd., New York Branch, and certain other lenders that may become a party to the facility from time to time, is backed by eligible trade receivables, as defined. Borrowings are limited to the lesser of the facility limit or the borrowing base, as defined. These receivables are originated by the Company and then sold or contributed to the wholly-owned special-purpose subsidiary. The Company continues to be responsible for the servicing and administration of the receivables purchased by the wholly-owned special-purpose subsidiary. Borrowings under the Trade Receivable Facility bear interest at a rate equal to one-month LIBOR plus 0.725%, subject to change in the event that this rate no longer reflects the lender's cost of lending. The Trade Receivable Facility contains a cross-default provision to the Company's other debt agreements.

The Company's long-term debt maturities for the five years following December 31, 2019, and thereafter are:

(in millions)	
2020	$ 340.0
2021	0.1
2022	0.1
2023	—
2024	696.7
Thereafter	1,736.7
Total	$ 2,773.6

The 2020 Floating Rate Notes mature on May 22, 2020. The Company has classified these obligations as noncurrent long-term debt on the consolidated balance sheet as of December 31, 2019 as it has the ability and intent to refinance the notes on a long-term basis. For the debt maturity schedule, the 2020 Floating Rate Notes are included in 2024.

The Company has a $5.0 million short-term line of credit. No amounts were outstanding under this line of credit at December 31, 2019 or 2018.

Note I: Financial Instruments

The Company's financial instruments include temporary cash investments, accounts receivable, notes receivable, accounts payable, publicly-registered long-term notes, debentures and other long-term debt.

Temporary cash investments are placed primarily in money market funds, money market demand deposit accounts or offshore time deposit accounts with financial institutions. The Company's cash equivalents have maturities of less than three months. Due to the short maturity of these investments, they are carried on the consolidated balance sheets at cost, which approximates fair value.

Accounts receivable are due from a large number of customers, primarily in the construction industry, and are dispersed across wide geographic and economic regions. However, accounts receivable are more heavily concentrated in certain states,

namely Texas, Colorado, North Carolina, Georgia and Iowa. The estimated fair values of accounts receivable approximate their carrying amounts.

Notes receivable are primarily promissory notes with customers and are not publicly traded. Management estimates that the fair value of notes receivable approximates its carrying amount.

Accounts payable represent amounts owed to suppliers and vendors. The estimated fair value of accounts payable approximates its carrying amount due to the short-term nature of the payables.

The carrying values and fair values of the Company's long-term debt were $ 2.77 billion and $2.94 billion, respectively, at December 31, 2019 and $ 3.12 billion and $3.01 billion, respectively, at December 31, 2018. The estimated fair value of the Company's publicly-registered long-term debt was estimated based on Level 2 of the fair value hierarchy using quoted market prices. The estimated fair values of other borrowings, which primarily represent variable-rate debt, approximate their carrying amounts as the interest rates reset periodically.

Note J: Income Taxes

The components of the Company's income tax expense (benefit) are as follows:

years ended December 31 (in millions)	**2019**	2018	2017
Federal income taxes:			
Current	**$ 83.9**	$ 15.3	$ 129.2
Deferred	**31.1**	69.6	(239.3)
Total federal income taxes	**115.0**	84.9	(110.1)
State income taxes:			
Current	**20.5**	6.0	14.8
Deferred	**(1.5)**	14.1	(0.9)
Total state income taxes	**19.0**	20.1	13.9
Foreign income taxes:			
Current	**2.8**	(1.4)	1.2
Deferred	**(0.5)**	2.1	0.5
Total foreign income taxes	**2.3**	0.7	1.7
Income tax expense (benefit)	**$ 136.3**	$ 105.7	$ (94.5)

On December 22, 2017, the U.S. government enacted the Tax Cuts and Jobs Act of 2017 (the 2017 Tax Act). The 2017 Tax Act included provisions that lowered the federal statutory corporate income tax rate from 35% to 21% beginning in 2018, imposed a one-time transition tax on mandatory deemed repatriation of undistributed net earnings and changed how foreign earnings are subject to U.S. tax. U.S. GAAP generally requires the effects of a tax law change to be recorded as a component of income tax expense in the period of enactment. However, the SEC staff issued Staff Accounting Bulletin No. 118 (SAB 118), which allowed companies to record provisional amounts during a measurement period of up to one year from enactment where the necessary information was not available to complete the accounting for certain income tax effects of the 2017 Tax Act.

The Company recognized, on a provisional basis, a net tax benefit of $ 258.1 million related to the 2017 Tax Act for the remeasurement of deferred tax assets and liabilities in its consolidated financial statements for the year ended December 31, 2017. In accordance with the provisions of SAB 118, the Company completed the accounting for the impact of the 2017 Tax Act during the year ended December 31, 2018, and as a result recognized income tax expense of $1.1 million for the transition tax on mandatory deemed repatriation of undistributed foreign earnings; income tax expense of $1.5 million for the write-off of deferred tax assets that will not be realized due to changes in the deductibility of executive compensation; and an income tax benefit of $21.5 million primarily related to the accelerated deductions for pension funding, inventory and insurance prepayments that were claimed on the Company's 2017 income tax returns.

For the year ended December 31, 2018, the benefit related to the utilization of federal net operating loss (NOL) carryforwards, reflected in current tax expense, was $5.8 million.

For the years ended December 31, 2019, 2018 and 2017, foreign pretax earnings were $ 15.1 million, $5.7 million and $10.6 million, respectively.

The Company's effective income tax rate varied from the statutory United States income tax rate because of the following tax differences:

years ended December 31	**2019**	2018	2017
Statutory income tax rate	**21.0%**	21.0%	35.0%
(Reduction) increase resulting from:			
Effect of statutory depletion	**(3.4)**	(3.4)	(5.6)
State income taxes, net of federal tax benefit	**2.0**	2.8	1.5
Change in tax status of subsidiary	**(1.7)**	—	—
Stock based compensation	**(0.5)**	(0.5)	(1.0)
Impact from 2017 Tax Act	—	(3.3)	(41.7)
Domestic production deduction	—	—	(2.2)
Other items	**0.8**	1.7	(1.3)
Effective income tax rate	**18.2%**	18.3%	(15.3%)

The statutory depletion deduction for all years is calculated as a percentage of sales, subject to certain limitations. Due to these limitations, the impact of changes in the sales volumes and earnings may not proportionately affect the Company's statutory depletion deduction and the corresponding impact on the effective income tax rate.

The Company recognized a net tax benefit from the change in tax status of a subsidiary from a partnership to a corporation in 2019, which reduced income tax expense and increased consolidated net earnings by $15.2 million, or $0.24 per diluted share.

The Company was entitled to receive a 9% tax deduction related to income from domestic (i.e., United States) production activities in 2017. The deduction reduced income tax expense and increased consolidated net earnings by $15.5 million, or $0.25 per diluted share, in 2017. The domestic production deduction was eliminated by the 2017 Tax Act.

The principal components of the Company's deferred tax assets and liabilities are as follows:

December 31	**Deferred Assets (Liabilities)**	
(in millions)	**2019**	2018
Deferred tax assets related to:		
Inventories	**$ 62.6**	$ 52.6
Valuation and other reserves	**22.3**	22.4
Net operating loss carryforwards	**10.5**	11.0
Accumulated other comprehensive loss	**85.2**	84.2
Lease liability	**114.7**	—
Other items, net	**2.9**	3.0
Gross deferred tax assets	**298.2**	173.2
Valuation allowance on deferred tax assets	**(9.0)**	(8.6)
Total net deferred tax assets	**289.2**	164.6
Deferred tax liabilities related to:		
Property, plant and equipment	**(700.8)**	(478.3)
Goodwill and other intangibles	**(151.7)**	(170.6)
Right-of-use assets	**(112.1)**	—
Partnerships and joint ventures	**(27.4)**	(204.3)
Employee benefits	**(30.2)**	(17.0)
Total deferred tax liabilities	**(1,022.2)**	(870.2)
Deferred income taxes, net	**$ (733.0)**	$ (705.6)

The Company had $4.1 million and $3.2 million of domestic federal NOL carryforwards at December 31, 2019 and 2018, respectively. The Company had domestic state NOL carryforwards of $161.0 million and $168.1 million at December 31, 2019

and 2018, respectively. These carryforwards have various expiration dates through 2039. At December 31, 2019 and 2018, deferred tax assets associated with these carryforwards were $10.5 million and $11.0 million, respectively, net of the federal benefit of the state deduction, for which valuation allowances of $ 9.0 million and $8.6 million, respectively, were recorded. The Company also had domestic state tax credit carryforwards of $1.1 million and $1.0 million at December 31, 2019 and 2018, respectively, which have various expiration dates through 2039. At December 31, 2019 and 2018, deferred tax assets associated with these carryforwards were $0.9 million and $0.8 million, respectively, net of the federal benefit of the state deduction.

Deferred tax liabilities for property, plant and equipment result from accelerated depreciation methods being used for income tax purposes as compared with the straight-line method for financial reporting purposes. The increase in 2019 compared with 2018 was primarily driven by the impact of 100% expensing of capital expenditures for tax purposes and by the change in the tax status of a subsidiary from a partnership to a corporation. The majority of the deferred tax liabilities recorded for the Company were related to property, plant and equipment.

Deferred tax liabilities for partnerships and joint ventures relate to the difference between the tax basis in partnerships and joint ventures when compared to the basis for financial reporting purposes. The decrease in 2019 compared with 2018 was a result of the change in the tax status of a subsidiary from a partnership to a corporation, which required the write-off of the deferred tax liability on the partnership investment, and the recording of deferred tax liabilities on the assets owned by the Company.

Deferred tax liabilities related to goodwill and other intangibles reflect the cessation of goodwill amortization for financial reporting purposes, while amortization continues for income tax purposes.

The Company expects to permanently reinvest the earnings from its wholly-owned Canadian and Bahamian subsidiaries, and accordingly, has not provided deferred taxes on the subsidiaries' undistributed net earnings or basis differences. The Company believes that the tax liability that would be incurred upon repatriation is immaterial at December 31, 2019.

The following table summarizes the Company's unrecognized tax benefits, excluding interest and correlative effects of $ 1.7 million and $0.6 million for the years ended December 31, 2019 and 2018, respectively:

years ended December 31 (in millions)	**2019**	2018	2017
Unrecognized tax benefits at beginning of year	**$ 24.1**	$ 22.4	$ 21.8
Gross increases – tax positions in prior years	**0.4**	0.9	1.4
Gross decreases – tax positions in prior years	**—**	—	(0.7)
Gross increases – tax positions in current year	**1.8**	1.8	5.0
Gross decreases – tax positions in current year	**(0.8)**	(1.0)	(0.9)
Lapse of statute of limitations	**—**	—	(4.2)
Unrecognized tax benefits at end of year	**$ 25.5**	$ 24.1	$ 22.4
Amount that, if recognized, would favorably impact the effective tax rate	**$ 15.5**	$ 12.8	$ 10.4

Unrecognized tax benefits are reversed as a discrete event if an examination of applicable tax returns is not initiated by a federal or state tax authority within the statute of limitations or upon effective settlement with federal or state tax authorities. Management believes its accrual for unrecognized tax benefits is sufficient to cover uncertain tax positions reviewed during audits by taxing authorities.

The Company anticipates that it is reasonably possible that its unrecognized tax benefits may decrease up to $ 17.1 million, excluding interest and correlative effects, during the twelve months ending December 31, 2020, due to the expiration of the statutes of limitations for the 2016 and all prior open tax years.

For the year ended December 31, 2017, $3.9 million was reversed into income upon the statute of limitations expiration for the 2010 through 2013 tax years.

The Company's tax years subject to federal, state or foreign examinations are 2011 through 2019.

Note K: Retirement Plans, Postretirement and Postemployment Benefits

The Company sponsors defined benefit retirement plans that cover substantially all employees. Additionally, the Company provides other postretirement benefits for certain employees, including medical benefits for retirees and their spouses and retiree life insurance. Employees starting on or after January 1, 2002 are not eligible for postretirement welfare plans. The Company also provides certain benefits, such as disability benefits, to former or inactive employees after employment but before retirement.

The measurement date for the Company's defined benefit plans, postretirement benefit plans and postemployment benefit plans is December 31.

Defined Benefit Retirement Plans. Retirement plan assets are invested in listed stocks, bonds, hedge funds, real estate and cash equivalents. Defined retirement benefits for salaried employees are based on each employee's years of service and average compensation for a specified period of time before retirement. Defined retirement benefits for hourly employees are generally stated amounts for specified periods of service.

The Company sponsors a Supplemental Excess Retirement Plan (SERP) that generally provides for the payment of retirement benefits in excess of allowable Internal Revenue Code limits. The SERP generally provides for a lump-sum payment of vested benefits. When these benefit payments exceed the sum of the service and interest costs for the SERP during a year, the Company recognizes a pro rata portion of the SERP's unrecognized actuarial loss as settlement expense.

The net periodic retirement benefit cost of defined benefit plans includes the following components:

years ended December 31 (in millions)	**2019**	2018	2017
Service cost	**$ 30.8**	$ 31.7	$ 26.9
Interest cost	**37.6**	33.2	36.1
Expected return on assets	**(47.9)**	(46.0)	(39.8)
Amortization of:			
Prior service cost	—	0.1	0.3
Actuarial loss	**16.0**	12.8	14.1
Settlement charge	—	2.9	—
Net periodic benefit cost	**$ 36.5**	$ 34.7	$ 37.6

The components of net periodic benefit cost, other than service cost, are included in the line item Other nonoperating expenses and (income), net, in the consolidated statements of earnings.

The expected return on assets is calculated by applying an annually selected expected rate of return assumption to the estimated fair value of the plan assets, giving consideration to contributions and benefits paid.

The Company recognized the following amounts in consolidated comprehensive earnings:

years ended December 31 (in millions)	**2019**	2018	2017
Actuarial loss	**$ 11.7**	$ 32.1	$ 13.3
Net prior service cost	**6.4**	—	—
Amortization of:			
Prior service cost	—	(0.1)	(0.3)
Actuarial loss	**(16.0)**	(12.8)	(14.1)
Settlement charge	—	(2.9)	—
Total	**$ 2.1**	$ 16.3	$ (1.1)

Accumulated other comprehensive loss includes the following amounts that have not yet been recognized in net periodic benefit cost:

December 31	2019		2018	
(in millions)	**Gross**	**Net of tax**	**Gross**	**Net of tax**
Prior service cost	**$ 6.4**	**$ 4.0**	$ —	$ —
Actuarial loss	**229.4**	**144.5**	233.7	146.6
Total	**$ 235.8**	**$ 148.5**	$ 233.7	$ 146.6

The prior service cost and actuarial loss expected to be recognized in net periodic benefit cost during 2020 are $ 0.7 million (net of deferred taxes of $ 0.2 million) and $13.5 million (net of deferred taxes of $ 3.3 million), respectively. These amounts are included in accumulated other comprehensive loss at December 31, 2019.

The defined benefit plans' change in projected benefit obligation is as follows:

years ended December 31 (in millions)	**2019**	2018
Net projected benefit obligation at beginning of year	**$ 847.9**	$ 879.3
Service cost	**30.8**	31.7
Interest cost	**37.6**	33.2
Actuarial loss (gain)	**95.2**	(54.6)
Plan amendments	**6.4**	—
Gross benefits paid	**(40.1)**	(41.7)
Net projected benefit obligation at end of year	**$ 977.8**	$ 847.9

The Company's change in plan assets, funded status and amounts recognized on the Company's consolidated balance sheets are as follows:

years ended December 31 (in millions)	**2019**	2018
Fair value of plan assets at beginning of year	**$ 717.9**	$ 638.1
Actual return on plan assets, net	**131.3**	(40.8)
Employer contributions	**58.9**	162.3
Gross benefits paid	**(40.1)**	(41.7)
Fair value of plan assets at end of year	**$ 868.0**	$ 717.9

December 31 (in millions)	**2019**	2018
Funded status of the plan at end of year	**$ (109.8)**	$ (130.0)
Accrued benefit cost	**$ (109.8)**	$ (130.0)

December 31 (in millions)	**2019**	2018
Amounts recognized on consolidated balance sheets consist of:		
Current liability	**$ (6.4)**	$ (9.0)
Noncurrent liability	**(103.4)**	(121.0)
Net amount recognized at end of year	**$ (109.8)**	$ (130.0)

The accumulated benefit obligation for all defined benefit pension plans was $ 878.7 million and $ 771.9 million at December 31, 2019 and 2018, respectively.

Benefit obligations and fair value of plan assets for pension plans with accumulated benefit obligations in excess of plan assets are as follows:

December 31 (in millions)	**2019**		2018	
Projected benefit obligation	**$**	**107.1**	$	98.7
Accumulated benefit obligation	**$**	**96.4**	$	85.5
Fair value of plan assets	**$**	**0.6**	$	0.6

Weighted-average assumptions used to determine benefit obligations as of December 31 are:

	2019	2018
Discount rate	**3.69%**	4.38%
Rate of increase in future compensation levels	**4.50%**	4.50%

Weighted-average assumptions used to determine net periodic benefit cost for the years ended December 31 are:

	2019	2018	2017
Discount rate	**4.38%**	3.76%	4.29%
Rate of increase in future compensation levels	**4.50%**	4.50%	4.50%
Expected long-term rate of return on assets	**6.75%**	6.75%	6.75%

The expected long-term rate of return on assets is based on a building-block approach, whereby the components are weighted based on the allocation of pension plan assets.

As of December 31, 2019 and 2018, the Company estimated the remaining lives of participants in the pension plans using the Pri-2012 and RP-2014 Base tables, respectively. The no-collar table was used for salaried participants and the blue-collar table was used for hourly participants; both tables were adjusted to reflect the experience of the Company's participants. The Company used the MP-2018 mortality improvement scale for the years 2019 and 2018.

The target allocation for 2019 and the actual pension plan asset allocation by asset class are as follows:

	Percentage of Plan Assets		
	2019		
	Target	*December 31*	
Asset Class	**Allocation**	**2019**	2018
Equity securities	56%	**64%**	57%
Debt securities	30%	**28%**	32%
Hedge funds	4%	**3%**	6%
Real estate	10%	**5%**	5%
Total	100%	**100%**	100%

The Company's investment strategy is for approximately 45% of equity securities, excluding hedge funds and real estate, to be invested in mid-sized to large capitalization U.S. funds, with the remaining invested in small capitalization, emerging markets and international funds. Debt securities, or fixed income investments, are invested in funds benchmarked to the Barclays U.S. Aggregate Bond Index.

The fair values of pension plan assets by asset class and fair value hierarchy level are as follows:

	Fair Value Measurements				
December 31	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Net Asset Value	Total Fair Value
(in millions)	2019				
Equity securities[1]:					
Mid-sized to large cap	$ —	$ —	$ —	$ **262.5**	$ **262.5**
Small cap, international and emerging growth funds	—	—	—	**290.3**	**290.3**
Debt securities[1]:					
Core fixed income	—	—	—	**242.9**	**242.9**
Real estate	—	—	—	**42.9**	**42.9**
Hedge funds	—	—	—	**26.4**	**26.4**
Cash equivalents	**3.0**	—	—	—	**3.0**
Total	$ **3.0**	$ —	$ —	$ **865.0**	$ **868.0**
	2018				
Equity securities[1]:					
Mid-sized to large cap	$ —	$ —	$ —	$ 196.5	$ 196.5
Small cap, international and emerging growth funds	—	—	—	210.4	210.4
Debt securities[1]:					
Core fixed income	—	—	—	228.2	228.2
Real estate	—	—	—	35.5	35.5
Hedge funds	—	—	—	44.4	44.4
Cash equivalents	2.9	—	—	—	2.9
Total	$ 2.9	$ —	$ —	$ 715.0	$ 717.9

1 These investments are common collective investment trusts valued using the net asset value (NAV) unit price provided by the fund administrator. The NAV is based on the value of the underlying assets owned by the fund.

Real estate investments are stated at estimated fair value, which is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair values of real estate investments generally do not reflect transaction costs that may be incurred upon disposition of the real estate investments and do not necessarily represent the prices at which the real estate investments would be sold or repaid, since market prices of real estate investments can only be determined by negotiation between a willing buyer and seller. An independent valuation consultant is employed to determine the fair value of the real estate investments. The value of hedge funds is based on the values of the sub-fund investments. In determining the fair value of each sub-fund's investment, the hedge funds' Board of Trustees uses the values provided by the sub-funds and any other considerations that may, in its judgment, increase or decrease such estimated value.

In 2019 and 2018, the Company made combined pension plan and SERP contributions of $ 58.9 million and $162.3 million, respectively. The Company currently estimates that it will contribute $60.2 million to its pension plans in 2020.

The expected benefit payments to be paid from plan assets for each of the next five years and the five-year period thereafter are as follows:

(in millions)	
2020	$ 43.5
2021	$ 44.8
2022	$ 46.2
2023	$ 47.6
2024	$ 50.9
Years 2025 - 2029	$ 271.0

Postretirement Benefits. The net periodic postretirement benefit credit for postretirement plans includes the following components:

years ended December 31 (in millions)	**2019**	2018	2017
Service cost	**$ 0.1**	$ 0.1	$ 0.1
Interest cost	**0.6**	0.5	0.7
Amortization of:			
Prior service credit	**(0.8)**	(2.1)	(1.7)
Actuarial gain	**(0.5)**	(0.2)	(0.4)
Total net periodic benefit credit	**$ (0.6)**	$ (1.7)	$ (1.3)

The components of net periodic benefit credit, other than service cost, are included in the line item Other nonoperating expenses and (income), net , in the consolidated statements of earnings.

The Company recognized the following amounts in consolidated comprehensive earnings:

years ended December 31 (in millions)	**2019**	2018	2017
Actuarial loss (gain)	**$ 1.0**	$ (1.7)	$ 1.2
Net prior service credit	**—**	—	(3.9)
Amortization of:			
Prior service credit	**0.8**	2.1	1.7
Actuarial gain	**0.5**	0.2	0.4
Total	**$ 2.3**	$ 0.6	$ (0.6)

Accumulated other comprehensive loss includes the following amounts that have not yet been recognized in net periodic benefit credit:

December 31	**2019**		2018	
(in millions)	**Gross**	**Net of tax**	**Gross**	**Net of tax**
Prior service credit	**$ (3.0)**	**$ (1.9)**	$ (3.8)	$ (2.4)
Actuarial gain	**(2.7)**	**(1.7)**	(4.2)	(2.7)
Total	**$ (5.7)**	**$ (3.6)**	$ (8.0)	$ (5.1)

The prior service credit and actuarial gain expected to be recognized in net periodic benefit cost during 2020 are $ 0.8 million (net of deferred taxes of $ 0.2 million) and $0.3 million (net of deferred taxes of $ 0.1 million), respectively, and are included in accumulated other comprehensive loss at December 31, 2019.

The postretirement health care plans' change in benefit obligation is as follows:

years ended December 31 (in millions)	**2019**	2018
Net benefit obligation at beginning of year	**$ 13.3**	$ 15.3
Service cost	**0.1**	0.1
Interest cost	**0.6**	0.5
Participants' contributions	**1.2**	0.3
Actuarial loss (gain)	**1.0**	(1.6)
Gross benefits paid	**(3.2)**	(1.3)
Net benefit obligation at end of year	**$ 13.0**	$ 13.3

The postretirement health care plans' change in plan assets, funded status and amounts recognized on the Company's consolidated balance sheets are as follows:

years ended December 31 (in millions)		2019		2018
Fair value of plan assets at beginning of year	**$**	**—**	$	—
Employer contributions		**2.0**		1.0
Participants' contributions		**1.2**		0.3
Gross benefits paid		**(3.2)**		(1.3)
Fair value of plan assets at end of year	**$**	**—**	$	—

December 31 (in millions)		2019		2018
Funded status of the plan at end of year	**$**	**(13.0)**	$	(13.3)
Accrued benefit cost	**$**	**(13.0)**	$	(13.3)

December 31 (in millions)		2019		2018
Amounts recognized on consolidated balance sheets consist of:				
Current liability	**$**	**(2.0)**	$	(1.0)
Noncurrent liability		**(11.0)**		(12.3)
Net amount recognized at end of year	**$**	**(13.0)**	$	(13.3)

Weighted-average assumptions used to determine the postretirement benefit obligation as of December 31 are:

	2019	2018
Discount rate	**3.29%**	4.15%

Weighted-average assumptions used to determine net postretirement benefit credit for the years ended December 31 are:

	2019	2018	2017
Discount rate	**4.15%**	3.47%	3.78%

As of December 31, 2019 and 2018, the Company estimated the remaining lives of participants in the postretirement benefit plans using the Pri-2012 and RP-2014 Base tables, respectively. The no-collar table was used for salaried participants and the blue-collar table was used for hourly participants; both tables were adjusted to reflect the experience of the Company's participants. The Company used the MP-2018 mortality improvement scale for the years 2019 and 2018.

Assumed health care cost trend rates at December 31 are:

	2019	2018
Health care cost trend rate assumed for next year	**6.75%**	7.0%
Rate to which the cost trend rate gradually declines	**4.75%**	5.0%
Year the rate reaches the ultimate rate	**2028**	2023

Assumed health care cost trend rates have a significant effect on the amounts reported for the Company's health care plans. A one percentage-point change in assumed health care cost trend rates would have the following effects:

	One Percentage Point			
(in millions)	Increase		(Decrease)	
Total service and interest cost components	$	—	$	—
Postretirement benefit obligation	$	0.7	$	(0.6)

The Company estimates that it will contribute $2.0 million to its postretirement health care plans in 2020.

The total expected benefit payments to be paid by the Company, net of participant contributions, for each of the next five years and the five-year period thereafter are as follows:

(in millions)		
2020	$	2.0
2021	$	1.4
2022	$	1.4
2023	$	1.3
2024	$	1.2
Years 2025 - 2029	$	4.7

***Defined Contribution Plan**.* The Company maintains a defined contribution plan that covers substantially all employees. This plan, qualified under Section 401(a) of the Internal Revenue Code, is a retirement savings and investment plan for the Company's salaried and hourly employees**.** Under certain provisions of the plan, the Company, at established rates, matches employees' eligible contributions. The Company's matching obligations were $ 17.6 million in 2019, $ 16.5 million in 2018 and $14.9 million in 2017.

Note L: Stock-Based Compensation

On May 19, 2016, the Company's shareholders approved the Martin Marietta Amended and Restated Stock-Based Award Plan. The Martin Marietta Materials, Inc. Stock-Based Award Plan, as amended from time to time, along with the Amended Omnibus Securities Award Plan, originally approved in 1994 (collectively, the Plans), are still effective for awards made prior to 2017. The Company has been authorized by the Board of Directors to repurchase shares of the Company's common stock for issuance under the stock-based award plans (see Note N).

The Company grants restricted stock awards under the Plans to a group of executive officers, key personnel and nonemployee members of the Board of Directors. The vesting of certain restricted stock awards is based on certain performance criteria over a specified period of time. The number of shares may be increased to the maximum or reduced to the minimum threshold based on the results of those criteria. In addition, certain awards are granted to individuals to encourage retention and motivate key employees. These awards generally vest if the employee is continuously employed over a specified period of time and require no payment from the employee. Awards granted to nonemployee members of the Board of Directors vest immediately.

The fair value of stock-based award grants is expensed over the vesting period. Awards to employees eligible for retirement prior to the award becoming fully vested are expensed over the period through the date that the employee first becomes eligible to retire and is no longer required to provide service to earn the award. Awards granted to nonemployee members of the Board of Directors are expensed immediately.

Additionally, an incentive compensation stock plan has been adopted under the Plans whereby certain participants may elect to use up to 50% of their annual incentive compensation to acquire units representing shares of the Company's common stock at a 20% discount to the market value on the date of the incentive compensation award. Certain executive officers are required to participate in the incentive compensation stock plan at certain minimum levels. Participants receive unrestricted shares of common stock in an amount equal to their respective units generally at the end of a 34-month period of additional employment from the date of award or at retirement beginning at age 62. All rights of ownership of the common stock convey to the participants upon the issuance of their respective shares at the end of the ownership-vesting period.

The following table summarizes information for restricted stock awards and incentive compensation stock awards for 2019:

	Restricted Stock - Service Based		Restricted Stock - Performance Based		Incentive Compensation Stock	
	Number of Awards	Weighted-Average Grant-Date Fair Value	Number of Awards	Weighted-Average Grant-Date Fair Value	Number of Awards	Weighted-Average Grant-Date Fair Value
January 1, 2019	278,147	$ 158.29	151,939	$ 174.74	35,376	$ 206.55
Awarded	86,922	$ 196.91	49,644	$ 192.27	21,883	$ 192.27
Distributed	(171,689)	$ 148.72	(54,424)	$ 133.73	(15,948)	$ 206.23
Forfeited	(9,441)	$ 166.51	(5,329)	$ 205.21	(1,727)	$ 205.54
Adjustment for performance	—	$ —	(17,609)	$ 133.77	—	$ —
December 31, 2019	183,939	$ 185.06	124,221	$ 204.21	39,584	$ 198.83

The weighted-average grant-date fair value of service-based restricted stock awards granted during 2019, 2018 and 2017 was $ 196.91, $211.03 and $213.76, respectively. The weighted-average grant-date fair value of performance-based restricted stock awards granted during 2019, 2018 and 2017 was $192.27, $212.12 and $207.73, respectively. The weighted-average grant-date fair value of incentive compensation stock awards granted during 2019, 2018 and 2017 was $192.27, $212.12 and $208.68, respectively.

The aggregate intrinsic values for unvested restricted stock awards and unvested incentive compensation stock awards at December 31, 2019 were $ 86.2 million and $4.8 million, respectively, and were based on the closing price of the Company's common stock at December 31, 2019, which was $ 279.64. The aggregate intrinsic values of restricted stock awards distributed during the years ended December 31, 2019, 2018 and 2017 were $49.8 million, $23.0 million and $15.8 million, respectively. The aggregate intrinsic values of incentive compensation stock awards distributed during the years ended December 31, 2019, 2018 and 2017 were $1.5 million, $1.7 million and $2.6 million, respectively. The aggregate intrinsic values for distributed awards were based on the closing prices of the Company's common stock on the dates of distribution.

Under the Plans, prior to 2016, the Company granted options to employees to purchase its common stock at a price equal to the closing market value at the date of grant. Options become exercisable in four annual installments beginning one year after date of grant. Options granted starting in 2013 expire ten years after the grant date while outstanding options granted prior to 2013 expire eight years after the grant date.

In connection with the TXI acquisition, completed in 2014, the Company issued 821,282 Martin Marietta stock options (Replacement Options) to holders of outstanding TXI stock options at the acquisition date. The Company issued 0.7 Replacement Options for each outstanding TXI stock option, and the Replacement Option prices reflected the exchange ratio. The Replacement Options will expire on the original contractual dates when the TXI stock options were initially issued. Consistent with the terms of the Company's other outstanding stock options, Replacement Options expire 90 days after employment is terminated.

The following table includes summary information for stock options as of December 31, 2019:

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life (years)
Outstanding at January 1, 2019	210,390	$ 95.93	
Exercised	(150,722)	$ 90.86	
Terminated	(828)	$ 94.75	
Outstanding at December 31, 2019	58,840	$ 108.93	3.1
Exercisable at December 31, 2019	58,840	$ 108.93	3.1

The aggregate intrinsic values of options exercised during the years ended December 31, 2019, 2018 and 2017 were $ 21.6 million, $12.4 million and $13.2 million, respectively, and were based on the closing prices of the Company's common stock on the dates of exercise. The aggregate intrinsic values for options outstanding and exercisable at December 31, 2019 were $10.0 million and were based on the closing price of the Company's common stock at December 31, 2019, which was $279.64. The excess tax benefits for stock options exercised during the years ended December 31, 2019, 2018 and 2017 were $ 2.0 million, $1.7 million and $3.5 million, respectively.

At December 31, 2019, there are approximately 742,000 awards available for grant under the Plans. In 2016, the Company's shareholders approved the issuance of an additional 800,000 shares of common stock under the Plans. As part of approving the shares, the Company agreed to not issue any additional awards under the legacy TXI plan. The awards available for grant under the Plans at December 31, 2019 reflect no awards available under the legacy TXI plan.

In 1996, the Company adopted the Shareholder Value Achievement Plan to award shares of the Company's common stock to key senior employees based on certain common stock performance criteria over a long-term period. Under the terms of this plan, 250,000 shares of common stock were reserved for issuance. Through December 31, 2019, 42,025 shares have been issued under this plan. No awards have been granted under this plan since 2000.

The Company adopted and the shareholders approved the Common Stock Purchase Plan for Directors in 1996, which provides nonemployee members of the Board of Directors the election to receive all or a portion of their total fees in the form of the Company's common stock. Beginning in 2016, members of the Board of Directors were not required to defer any of their fees in the form of the Company's common stock. Under the terms of this plan, 300,000 shares of common stock were reserved for issuance. Nonemployee members of the Board of Directors elected to defer portions of their fees representing 2,756, 3,105 and 2,132 shares of the Company's common stock under this plan during 2019, 2018 and 2017, respectively.

The following table summarizes stock-based compensation expense for the years ended December 31, 2019, 2018 and 2017, unrecognized compensation cost for nonvested awards at December 31, 2019 and the weighted-average period over which unrecognized compensation cost will be recognized:

(in millions, except year data)	Stock Options	Restricted Stock	Incentive Compensation Stock	Directors' Awards	Total
Stock-based compensation expense recognized for years ended December 31:					
2019	**$ 0.1**	**$ 32.6**	**$ 0.8**	**$ 0.6**	**$ 34.1**
2018	$ 0.3	$ 27.7	$ 0.7	$ 0.6	$ 29.3
2017	$ 0.7	$ 28.7	$ 0.7	$ 0.4	$ 30.5
Unrecognized compensation cost at December 31, 2019	**$ —**	**$ 22.7**	**$ 0.5**	**$ —**	**$ 23.2**
Weighted-average period over which unrecognized compensation cost will be recognized		2.1 years	1.7 years		

The following presents expected stock-based compensation expense in future periods for outstanding awards as of December 31, 2019:

(in millions)	
2020	$ 14.9
2021	7.2
2022	0.8
2023	0.3
Total	$ 23.2

Stock-based compensation expense is included in selling, general and administrative expenses in the Company's consolidated statements of earnings.

Note M: Leases

The Company has leases, primarily for equipment, railcars, fleet vehicles, office space, land and information technology equipment and software. The Company's leases have remaining lease terms of one year to 53 years, some of which may include options to extend the leases for up to 30 years, and some of which may include options to terminate the leases within one year.

Certain of the Company's lease agreements include payments based upon variable rates, including, but not limited, to hours used, tonnage processed and factors related to indices. The Company's lease agreements do not contain any material residual value guarantees or material restrictive covenants.

The components of lease cost are as follows:

year ended December 31 (in millions)		**2019**
Operating lease cost	$	80.9
Finance lease cost:		
Amortization of right-of-use assets		3.4
Interest on lease liabilities		0.5
Variable lease cost		21.1
Short-term lease cost		33.0
Total lease cost	$	138.9

The Company has royalty agreements that are prescriptively excluded from the scope of ASC 842 and generally require royalty payments based on tons produced, tons sold or total sales dollars and also contain minimum payments. Royalty expense was $58.2 million for the year ended December 31, 2019.

The balance sheet classifications of operating and finance leases are as follows:

December 31 (in millions)		**2019**
Operating Leases:		
Operating lease right-of-use assets	$	481.9
Current operating lease liabilities	$	52.7
Noncurrent operating lease liabilities		433.9
Total operating lease liabilities	$	486.6
Finance Leases:		
Property, plant and equipment	$	18.3
Accumulated depreciation		(3.1)
Property, plant and equipment, net	$	15.2
Other current liabilities	$	2.8
Other noncurrent liabilities		5.9
Total finance lease liabilities	$	8.7

The incremental borrowing rate range used was 2.1% to 5.5%. Weighted-average remaining lease terms and discount rates are as follows:

December 31	2019
Weighted-average remaining lease terms (years):	
Operating leases	14.5
Finance leases	9.0
Weighted-average discount rates:	
Operating leases	4.3%
Finance leases	5.2%

Future lease payments as of December 31, 2019 are as follows:

(in millions)	Operating Leases	Finance Leases
2020	$ 71.9	$ 3.2
2021	58.9	1.9
2022	53.1	1.1
2023	49.2	0.8
2024	42.1	0.7
Thereafter	396.1	3.5
Total lease payments	671.3	11.2
Less: imputed interest	(184.7)	(2.5)
Present value of lease payments	486.6	8.7
Less: current lease obligations	(52.7)	(2.8)
Total long-term lease obligations	$ 433.9	$ 5.9

Leases entered into but not yet commenced as of December 31, 2019 are immaterial.

Subsequent to December 31, 2019, the Company entered into a lease for its corporate headquarters in Raleigh, North Carolina to commence in 2021. The agreement represents a 15-year lease with fixed rent payments totaling approximately $56 million over the term of the lease.

Lease disclosures for the years ended December 31, 2018 and 2017 prior to the adoption of ASC 842 are as follows:

Total lease expense for operating leases was $ 122.5 million and $90.7 million for the years ended December 31, 2018 and 2017, respectively. Total royalties, principally for leased properties, were $52.5 million and $51.8 million for the years ended December 31, 2018 and 2017, respectively. The Company also has capital lease obligations for machinery and equipment. Future minimum lease and royalty commitments for all noncancelable agreements and capital lease obligations as of December 31, 2018 were as follows:

(in millions)	Capital Leases	Operating Leases	Royalty Commitments
2019	$ 3.7	$ 106.0	$ 14.6
2020	2.7	70.5	11.4
2021	1.7	60.4	10.3
2022	1.0	57.5	9.5
2023	0.7	56.5	8.1
Thereafter	3.9	318.1	66.0
Total	13.7	$ 669.0	$ 119.9
Less: imputed interest	(2.9)		
Present value of minimum lease payments	10.8		
Less: current capital lease obligations	(3.2)		
Long-term capital lease obligations	$ 7.6		

Note N: Shareholders' Equity

The authorized capital structure of the Company includes 100.0 million shares of common stock, with a par value of $0.01 a share. At December 31, 2019, approximately 1.5 million common shares were reserved for issuance under stock-based award plans.

Pursuant to authority granted by its Board of Directors, the Company can repurchase up to 20.0 million shares of common stock. The Company repurchased 0.4 million, 0.5 million and 0.5 million shares of common stock during 2019, 2018 and 2017, respectively. At December 31, 2019, 13.7 million shares of common stock were remaining under the Company's repurchase authorization.

Note O: Commitments and Contingencies

Legal and Administrative Proceedings. The Company is engaged in certain legal and administrative proceedings incidental to its normal business activities. In the opinion of management and counsel, based upon currently-available facts, the likelihood is remote that the ultimate outcome of any litigation and other proceedings, including those pertaining to environmental matters (see Note A), relating to the Company and its subsidiaries, will have a material adverse effect on the overall results of the Company's operations, its cash flows or its financial position.

Asset Retirement Obligations. The Company incurs reclamation and teardown costs as part of its mining and production processes. Estimated future obligations are discounted to their present value and accreted to their projected future obligations via charges to operating expenses. Additionally, the fixed assets recorded concurrently with the liabilities are depreciated over the period until retirement activities are expected to occur. Total accretion and depreciation expenses for 2019, 2018 and 2017 were $9.1 million, $8.0 million and $8.7 million, respectively, and are included in *Other operating income and expenses, net*, in the consolidated statements of earnings.

The following shows the changes in the asset retirement obligations:

years ended December 31 (in millions)	**2019**	2018
Balance at beginning of year	**$ 121.8**	$ 109.7
Accretion expense	**5.6**	5.1
Liabilities incurred and liabilities assumed in business combinations	**0.6**	4.6
Liabilities settled	**(1.2)**	(2.8)
Revisions in estimated cash flows	**17.1**	5.2
Balance at end of year	**$ 143.9**	$ 121.8

Other Environmental Matters. The Company's operations are subject to and affected by federal, state and local laws and regulations relating to the environment, health and safety and other regulatory matters. Certain of the Company's operations may, from time to time, involve the use of substances that are classified as toxic or hazardous within the meaning of these laws and regulations. Environmental operating permits are, or may be, required for certain of the Company's operations, and such permits are subject to modification, renewal and revocation. The Company regularly monitors and reviews its operations, procedures and policies for compliance with these laws and regulations. Despite these compliance efforts, risk of environmental remediation liability is inherent in the operation of the Company's businesses, as it is with other companies engaged in similar businesses. The Company has no material provisions for environmental remediation liabilities and does not believe such liabilities will have a material adverse effect on the Company in the future.

Insurance Reserves. At December 31, 2019 and 2018, reserves of $39.9 million and $48.3 million, respectively, were recorded for insurance claims.

Letters of Credit. In the normal course of business, the Company provides certain third parties with standby letter of credit agreements guaranteeing its payment for certain insurance claims, contract performance and permit requirements. At December 31, 2019, the Company was contingently liable for $32.9 million in letters of credit.

Surety Bonds. In the normal course of business, at December 31, 2019, the Company was contingently liable for $ 395.1 million in surety bonds required by certain states and municipalities and their related agencies. The bonds are principally for

certain insurance claims, construction contracts, reclamation obligations and mining permits guaranteeing the Company's own performance. The Company has indemnified the underwriting insurance company, Liberty Mutual, against any exposure under the surety bonds. In the Company's past experience, no material claims have been made against these financial instruments.

Borrowing Arrangements with Affiliate. The Company is a co-borrower with an unconsolidated affiliate for a $15.5 million revolving line of credit agreement with Truist Bank, a successor by merger to Suntrust Bank and formerly known as BB&T, of which $ 11.3 million was outstanding as of December 31, 2019. The line of credit expires in March 2020. The affiliate has agreed to reimburse and indemnify the Company for any payments and expenses the Company may incur from this agreement. The Company holds a lien on the affiliate's membership interest in a joint venture as collateral for payment under the revolving line of credit.

At December 31, 2019 and 2018, the Company had an interest-only $ 6.0 million note receivable from the unconsolidated affiliate due December 31, 2022.

Purchase Commitments. The Company had purchase commitments for property, plant and equipment of $93.4 million as of December 31, 2019. The Company also had other purchase obligations related to energy and service contracts of $82.9 million as of December 31, 2019. ***The Company's contractual purchase commitments as of December 31, 2019 are as follows:***

(in millions)		
2020	$	140.6
2021		15.0
2022		3.0
2023		0.9
2024		0.9
Thereafter		15.9
Total	$	176.3

Capital expenditures in 2019, 2018 and 2017 that were purchase commitments as of the prior year end were $106.7 million, $79.3 million and $83.7 million, respectively.

Contracts of Affreightment and Royalty Commitments. Future minimum contracts of affreightment and royalty commitments for all noncancelable agreements as of December 31, 2019 are as follows:

(in millions)	Contracts of Affreightment		Royalty Commitments	
2020	$	15.8	$	15.7
2021		16.1		11.1
2022		16.3		10.3
2023		16.6		9.2
2024		16.9		8.9
Thereafter		52.2		59.7
Total	$	133.9	$	114.9

Employees. Approximately 11% of the Company's employees are represented by a labor union. All such employees are hourly employees. The Company maintains collective bargaining agreements relating to the union employees within the Building Materials business and Magnesia Specialties segment. 100% of the hourly employees of the Magnesia Specialties segment, located in Manistee, Michigan and Woodville, Ohio, are represented by labor unions. The Woodville collective bargaining agreement expires in June 2022. The Manistee collective bargaining agreement expires in August 2023.

Note P: Segments

The Building Materials business is comprised of divisions which represent operating segments, some of which are consolidated into reportable segments for financial reporting purposes as they meet the aggregation criteria. The Building Materials business contains three reportable segments: Mid-America Group, Southeast Group and West Group. The

Magnesia Specialties business represents an individual operating and reportable segment. The accounting policies used for segment reporting are the same as those described in Note A.

The Chief Operating Decision Maker's evaluation of performance and allocation of resources are based primarily on earnings from operations. Consolidated earnings from operations include total revenues less cost of revenues; selling, general and administrative expenses; acquisition-related expenses, net; other operating income and expenses, net; and exclude interest expense; other nonoperating income and expenses, net; and income tax expense (benefit). Corporate loss from operations primarily includes depreciation on capitalized interest; expenses for corporate administrative functions; acquisition-related expenses, net; and other nonrecurring and/or non-operational income and expenses excluded from the Company's evaluation of segment performance and resource allocation. All long-term debt and related interest expense are held at Corporate.

Assets employed by segment include assets directly identified with those operations. Corporate assets consist primarily of cash and cash equivalents; property, plant and equipment for corporate operations; investments and other assets not directly identifiable with a reportable segment.

The following tables display selected financial data for the Company's reportable segments. The acquired Bluegrass operations are reported in the Mid-America Group and Southeast Group. Total revenues, as well as the consolidated statements of earnings and comprehensive earnings, reflect the elimination of intersegment revenues.

years ended December 31 (in millions) **Total revenues**	**2019**	2018	2017
Mid-America Group	**$ 1,446.0**	$ 1,223.2	$ 1,053.3
Southeast Group	**506.4**	423.4	362.6
West Group	**2,515.4**	2,310.0	2,279.7
Total Building Materials Business	**4,467.8**	3,956.6	3,695.6
Magnesia Specialties	**271.3**	287.7	270.0
Total	**$ 4,739.1**	$ 4,244.3	$ 3,965.6
Gross profit			
Mid-America Group	**$ 482.9**	$ 366.9	$ 335.4
Southeast Group	**124.1**	77.2	74.6
West Group	**473.6**	416.2	465.6
Total Building Materials Business	**1,080.6**	860.3	875.6
Magnesia Specialties	**95.4**	98.7	89.4
Corporate	**3.0**	7.6	6.9
Total	**$ 1,179.0**	$ 966.6	$ 971.9
Selling, general and administrative expenses			
Mid-America Group	**$ 63.1**	$ 55.8	$ 53.9
Southeast Group	**21.6**	18.7	17.1
West Group	**116.3**	107.6	102.7
Total Building Materials Business	**201.0**	182.1	173.7
Magnesia Specialties	**11.3**	10.0	9.5
Corporate	**90.4**	88.5	78.9
Total	**$ 302.7**	$ 280.6	$ 262.1

years ended December 31 (in millions) **Earnings (Loss) from operations**	**2019**	2018	2017
Mid-America Group	**$ 425.9**	$ 319.1	$ 284.8
Southeast Group	**103.1**	75.9	61.2
West Group	**365.2**	295.8	360.6
Total Building Materials Business	**894.2**	690.8	706.6
Magnesia Specialties	**83.6**	88.1	79.4
Corporate	**(92.9)**	(88.2)	(85.6)
Total	**$ 884.9**	$ 690.7	$ 700.4

Earnings from operations for the West Group for 2018 reflect an asset and portfolio rationalization charge of $18.8 million.

December 31 (in millions) **Assets employed**	**2019**	2018	2017
Mid-America Group	**$ 2,879.3**	$ 2,788.5	$ 1,532.9
Southeast Group	**1,442.5**	1,299.5	616.3
West Group	**5,320.7**	4,989.6	5,014.2
Total Building Materials Business	**9,642.5**	9,077.6	7,163.4
Magnesia Specialties	**176.2**	156.1	152.3
Corporate	**312.9**	317.7	1,676.8
Total	**$ 10,131.6**	$ 9,551.4	$ 8,992.5

years ended December 31 (in millions) **Depreciation, depletion and amortization**	**2019**	2018	2017
Mid-America Group	**$ 110.2**	$ 93.6	$ 69.7
Southeast Group	**47.8**	41.2	30.8
West Group	**183.3**	180.9	169.8
Total Building Materials Business	**341.3**	315.7	270.3
Magnesia Specialties	**10.2**	10.4	10.1
Corporate	**20.0**	17.9	16.8
Total	**$ 371.5**	$ 344.0	$ 297.2
Total property additions, including the impact of acquisitions			
Mid-America Group	**$ 127.7**	$ 1,157.1	$ 139.5
Southeast Group	**45.3**	603.1	34.6
West Group	**182.6**	148.1	240.8
Total Building Materials Business	**355.6**	1,908.3	414.9
Magnesia Specialties	**20.0**	12.5	11.1
Corporate	**12.0**	4.8	12.6
Total	**$ 387.6**	$ 1,925.6	$ 438.6

years ended December 31 (in millions) **Property additions through acquisitions**	**2019**	2018	2017
Mid-America Group	**$ —**	$ 980.3	$ 0.1
Southeast Group	**—**	561.5	—
West Group	**—**	1.4	2.4
Total Building Materials Business	**—**	1,543.2	2.5
Magnesia Specialties	**—**	—	—
Corporate	**—**	—	—
Total	**$ —**	$ 1,543.2	$ 2.5

Note Q: Revenues and Gross Profit

The following tables, which are reconciled to consolidated amounts, provide total revenues and gross profit by line of business: Building Materials (further divided by product line) and Magnesia Specialties. Interproduct revenues represent sales from the aggregates product line to the ready mixed concrete and asphalt and paving product lines and sales from the cement product line to the ready mixed concrete product line. The Company's two cold mix asphalt plants have been reclassified from the asphalt and paving product line to the aggregates product line. These operations did not represent a material amount of product revenues and gross profit. Prior year information has been reclassified to conform to the presentation of the Company's current reportable product lines.

years ended December 31 (in millions) **Total revenues**	**2019**	2018	2017
Building Materials Business:			
Products and services:			
Aggregates	**$ 2,756.7**	$ 2,365.8	$ 2,145.6
Cement	**439.1**	387.8	371.2
Ready Mixed Concrete	**948.1**	963.8	936.0
Asphalt and Paving	**294.0**	258.6	282.0
Less: Interproduct revenues	**(265.5)**	(264.2)	(264.0)
Products and services	**4,172.4**	3,711.8	3,470.8
Freight	**295.4**	244.8	224.8
Total Building Materials Business	**4,467.8**	3,956.6	3,695.6
Magnesia Specialties:			
Products and services	**249.9**	268.6	252.7
Freight	**21.4**	19.1	17.3
Total Magnesia Specialties	**271.3**	287.7	270.0
Consolidated total revenues	**$ 4,739.1**	$ 4,244.3	$ 3,965.6

Gross profit (loss)			
Building Materials Business:			
Products and services:			
Aggregates	**$ 807.9**	$ 608.4	$ 602.3
Cement	**143.4**	126.2	117.0
Ready Mixed Concrete	**78.8**	74.2	91.6
Asphalt and Paving	**50.7**	51.3	62.1
Products and services	**1,080.8**	860.1	873.0
Freight	**(0.2)**	0.2	2.6
Total Building Materials Business	**1,080.6**	860.3	875.6
Magnesia Specialties:			
Products and services	**99.4**	102.9	94.1
Freight	**(4.0)**	(4.2)	(4.7)
Total Magnesia Specialties	**95.4**	98.7	89.4
Corporate	**3.0**	7.6	6.9
Consolidated gross profit	**$ 1,179.0**	$ 966.6	$ 971.9

Domestic and foreign total revenues are as follows:

years ended December 31 (in millions)	**2019**	2018	2017
Domestic	**$ 4,676.3**	$ 4,166.4	$ 3,901.3
Foreign	**62.8**	77.9	64.3
Consolidated total revenues	**$ 4,739.1**	$ 4,244.3	$ 3,965.6

Note R: Supplemental Cash Flow Information

Noncash investing and financing activities are as follows:

years ended December 31 (in millions)	2019	2018	2017
Accrued liabilities for purchases of property, plant and equipment	**$ 54.2**	$ 67.0	$ 61.6
Acquisition of assets through asset exchange	**$ 2.4**	$ —	$ 2.5
Remeasurement of operating lease right-of-use assets	**$ 2.0**	$ —	$ —
Right-of-use assets obtained in exchange for new operating lease liabilities	**$ 45.7**	$ —	$ —
Right-of-use assets obtained in exchange for new finance lease liabilities	**$ 0.2**	$ —	$ —
Acquisition of assets through capital lease	**$ —**	$ 1.1	$ 0.8
Sale of asset to settle liability	**$ —**	$ —	$ 0.9

Supplemental disclosures of cash flow information are as follows:

years ended December 31 (in millions)	2019	2018	2017
Cash paid for interest, net of amount capitalized	**$ 127.9**	$ 137.2	$ 78.9
Cash paid for income taxes	**$ 101.7**	$ 28.9	$ 155.8
Cash paid for amounts included in the measurement of lease liabilities[1]:			
Operating cash flows used for operating leases	**$ 76.1**		
Operating cash flows used for finance leases	**$ 0.5**		
Financing cash flows used for finance leases	**$ 11.0**		

[1] These disclosures are required by ASC 842, which was adopted on January 1, 2019.

Note S: Other Operating (Income) and Expenses, Net

Other operating income and expenses, net, are comprised generally of gains and losses on the sale of assets; asset and portfolio rationalization charges; recoveries and losses related to certain customer accounts receivable; rental, royalty and services income; accretion expense, depreciation expense and gains and losses related to asset retirement obligations. These net amounts represented income of $9.1 million in 2019, income of $18.2 million in 2018 and an expense of $0.8 million in 2017. 2019 income includes the reversal of $6.9 million of accruals for sales tax and unclaimed property contingencies. The 2018 amount reflects $18.8 million of asset and portfolio rationalization charges, offset by $7.7 million in net gains on legal settlements and $25.3 million in gains on the sale of assets, primarily excess land. The 2017 amount reflects $19.4 million of gains on the sale of assets, primarily excess land, offset by $12.7 million of nonrecurring repair costs related to certain of the Company's leased railcars and $10.8 million of executive retirement expense.

The asset and portfolio rationalization charge relates to the Company's Southwest ready mixed concrete operations reported in the West Group. This charge reflects the Company's evaluation of the recoverability of certain long-lived assets, including property, plant and equipment and intangible assets, for underperforming operations in this business and a reduction in workforce. Of the total charge, $17.0 million was noncash and $1.8 million was settled in cash.

Quarterly Performance (Unaudited) (in millions, except per share data)

Quarter	Total Revenues		Gross Profit		Consolidated Net Earnings		Net Earnings Attributable to Martin Marietta	
	2019	2018	**2019**	2018[4,5]	**2019[2,3]**	2018[4,5,6,7]	**2019[2,3]**	2018[4,5,6,7]
First	**$ 939.0**	$ 802.0	**$ 142.9**	$ 110.4	**$ 42.8**	$ 10.0	**$ 42.8**	$ 10.0
Second	**1,279.5**	1,202.4	**356.9**	315.9	**189.5**	185.5	**189.5**	185.4
Third	**1,420.2**	1,219.6	**420.6**	313.0	**248.6**	180.4	**248.6**	180.2
Fourth	**1,100.4**	1,020.3	**258.6**	227.3	**131.1**	94.5	**131.0**	94.4
Totals	**$ 4,739.1**	$ 4,244.3	**$ 1,179.0**	$ 966.6	**$ 612.0**	$ 470.4	**$ 611.9**	$ 470.0

Per Common Share				
	Basic Earnings[1]		Diluted Earnings[1]	
Quarter	**2019[2,3]**	2018[4,5,6,7]	**2019[2,3]**	2018[4,5,6,7]
First	**$ 0.68**	$ 0.16	**$ 0.68**	$ 0.16
Second	**$ 3.02**	$ 2.94	**$ 3.01**	$ 2.92
Third	**$ 3.97**	$ 2.86	**$ 3.96**	$ 2.85
Fourth	**$ 2.10**	$ 1.50	**$ 2.09**	$ 1.50
Full Year	**$ 9.77**	$ 7.46	**$ 9.74**	$ 7.43

1 The sum of per-share earnings by quarter may not equal earnings per share for the year due to changes in average share calculations. This is in accordance with prescribed reporting requirements.

2 Consolidated net earnings, net earnings attributable to Martin Marietta, and basic and diluted earnings per common share for the first quarter of 2019 were increased by $13.2 million, or $0.21 per basic and diluted share, due to a change in tax election for an acquired entity.

3 Consolidated net earnings, net earnings attributable to Martin Marietta, and basic and diluted earnings per common share for the second quarter of 2019 were reduced by $12.0 million, or $0.19 per basic and diluted share, due to a charge to correct a prior-period error that overstated equity earnings from a nonconsolidated affiliate.

4 Gross profit for the second quarter of 2018 was $10.2 million lower due to the impact of selling acquired inventory after its markup to fair value as part of acquisition accounting. Consolidated net earnings, net earnings attributable to Martin Marietta, and basic and diluted earnings per common share for the second quarter of 2018 were reduced by $13.2 million, or $0.21 per basic and diluted share, as a result of acquisition-related expenses, net, primarily attributable to the acquisition of Bluegrass Materials Company, and by $7.8 million, or $0.12 per basic and diluted share, for the impact of selling acquired inventory after its markup to fair value as part of acquisition accounting.

5 Gross profit for the third quarter of 2018 was $8.3 million lower due to the impact of selling acquired inventory after its markup to fair value as part of acquisition accounting. Consolidated net earnings, net earnings attributable to Martin Marietta, and basic and diluted earnings per common share for the third quarter of 2018 were $5.6 million, or $0.09 per basic and diluted share, lower due to an asset and portfolio rationalization charge and $6.4 million, or $0.10 per basic and diluted share, lower due to the impact of selling acquired inventory after its markup to fair value as part of acquisition accounting

6 Consolidated net earnings, net earnings attributable to Martin Marietta, and basic and diluted earnings per share for the third quarter ended September 30, 2018 were increased $21.2 million, or $0.34 per basic and diluted share, as a result of measurement period adjustments related to the 2017 Tax Act.

7 Consolidated net earnings, net earnings attributable to Martin Marietta, and basic and diluted earnings per common share for the fourth quarter of 2018 were $9.1 million, or $0.14 per basic and diluted share, lower due to an asset and portfolio rationalization charge.

ITEM 9 – CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FIN. DISCLOSURE

None.

ITEM 9A – CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of December 31, 2019, an evaluation was performed under the supervision and with the participation of the Company's management, including the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), of the effectiveness of the design and operation of the Company's disclosure controls and procedures. Based on that evaluation, the Company's CEO and CFO concluded that the Company's disclosure controls and procedures were effective at the reasonable assurance level.

The foregoing evaluation of the Company's disclosure controls and procedures was based on the definition in Exchange Act Rule 13a-15(e), which requires that disclosure controls and procedures are effectively designed to provide reasonable assurance that information required to be disclosed by an issuer in the reports that it files or submits with the SEC under the Exchange Act is recorded, processed, summarized, and reported, within the time periods specified in the SEC's rules and forms, and is accumulated and communicated to the issuer's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Our management's report on internal control over financial reporting is included as the "Statement of Financial Responsibility and Management's Report on Internal Controls over Financial Reporting" in Item 8, "Financial Statements and Supplemental Data," of this Form 10-K. The Company's management concluded that the Company's internal control over financial reporting was effective in providing reasonable assurance regarding the reliability of financial reporting and the preparation of the Company's financial statements for external purposes in accordance with generally accepted accounting principles as of December 31, 2019. PricewaterhouseCoopers LLP, the independent registered public accounting firm that audited the Company's consolidated financial statements contained herein, also audited the Company's internal control over financial reporting as of December 31, 2019. The audit report is included in Item 8, "Financial Statements and Supplementary Data," of this Form 10-K.

Changes in Internal Control over Financial Reporting

There were no changes in the Company's internal control over financial reporting during the most recently completed fiscal quarter ended December 31, 2019 that materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Limitations on the Effectiveness of Controls

The Company's management, including the CEO and CFO, does not expect that the Company's control system will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision making can be faulty and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

CEO and CFO Certifications

Included among the exhibits to this Form 10-K are forms of "Certifications" of the Company's CEO and CFO as required in accordance with Section 302 of the Sarbanes-Oxley Act of 2002 (the "Section 302 Certification"). The Section 302 Certifications refer to this evaluation of the Company's disclosure policies and procedures and internal control over financial reporting. The information in this section should be read in conjunction with the Section 302 Certifications for a more complete understanding of the topics presented.

ITEM 9B – OTHER INFORMATION

None.

PART III

ITEM 10 – DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information concerning directors of the Company, the Audit Committee of the Board of Directors, and the Audit Committee financial expert serving on the Audit Committee, all as required in response to this Item 10, is included under the captions “Corporate Governance Matters” in the Company’s definitive proxy statement to be filed with the SEC pursuant to Regulation 14A within 120 days after the close of the Company’s fiscal year ended December 31, 2019 (the “2020 Proxy Statement”), and that information is hereby incorporated by reference in this Form 10-K. Information concerning Section 16(a) reporting compliance is incorporated by reference to the information appearing under the caption “Delinquent Section 16(a) Reports” in the 2020 Proxy Statement. Information concerning executive officers of the Company required in response to this Item 10 is included in Part I, under the heading “Information about our Executive Officers,” of this Form 10-K. The information concerning the Company’s code of ethics required in response to this Item 10 is included in Part I, under the heading “Available Information,” of this Form 10-K.

ITEM 11 – EXECUTIVE COMPENSATION

The information required in response to this Item 11 is included under the captions “Executive Compensation,” “Compensation Discussion and Analysis,” “Corporate Governance Matters,” “Management Development and Compensation Committee Report,” and “Compensation Committee Interlocks and Insider Participation” in the Company’s 2020 Proxy Statement, and that information is hereby incorporated by reference in this Form 10-K.

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

The information required in response to this Item 12 is included under the captions “General Information,” “Security Ownership of Certain Beneficial Owners and Management,” and “Securities Authorized for Issuance Under Equity Compensation Plans” in the Company’s 2020 Proxy Statement, and that information is hereby incorporated by reference in this Form 10-K.

[illegible]

The information required in response to this Item 13 is included under the captions “Compensation Committee Interlocks and Insider Participation in Compensation Decisions” and “Corporate Governance Matters” in the Company’s 2020 Proxy Statement, and that information is hereby incorporated by reference in this Form 10-K.

ITEM 14 – PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required in response to this Item 14 is included under the caption “Independent Auditors” in the Company’s 2020 Proxy Statement, and that information is hereby incorporated by reference in this Form 10-K.

PART IV

ITEM 15 – EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) (1) List of financial statements filed as part of this Form 10-K

The consolidated financial statements of Martin Marietta and consolidated subsidiaries, and related notes, appear in Item 8, “Financial Statements and Supplemental Data,” of this Form 10-K.

(2) List of financial statement schedules filed as part of this Form 10-K

The following financial statement schedule of Martin Marietta and consolidated subsidiaries is included in Item 15(c) of this Form 10-K.

Schedule II - Valuation and Qualifying Accounts

All other schedules have been omitted because they are not applicable, not required, or the information has been otherwise supplied in the financial statements or notes to the financial statements.

The report of the Company’s independent registered public accounting firm with respect to the above-referenced financial statements is included in Item 8, “Financial Statements and Supplemental Data,” of this Form 10-K. The report on the financial statement schedule and the consent of the Company’s independent registered public accounting firm are attached as Exhibit 23.01 to this Form 10-K.

(3) Exhibits

The list of Exhibits on the accompanying Index of Exhibits included in Item 15(b) of this Form 10-K is hereby incorporated by reference. Each management contract or compensatory plan or arrangement required to be filed as an exhibit is indicated by asterisks.

(b) Index of Exhibits

Exhibit No.	
3.01	--Restated Articles of Incorporation of the Company, as amended (incorporated by reference to Exhibit 3.01 to the Martin Marietta Materials, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed on February 24, 2017) (Commission File No. 1-12744)
3.02	--Restated Bylaws of the Company (incorporated by reference to Exhibit 3.2 to the Martin Marietta Materials, Inc. Current Report on Form 8-K, filed on February 22, 2018) (Commission File No. 1-12744)
4.01	--Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.01 to the Martin Marietta Materials, Inc. registration statement on Form S-1, filed on December 8, 1993 (SEC Registration No. 33-72648) (P)
4.02	--Article 5 of the Company’s Restated Articles of Incorporation, as amended (incorporated by reference to Exhibit 3.01 to the Martin Marietta Materials, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed on February 24, 2017) (Commission File No. 1-12744)
4.03	--Article 1 of the Company’s Restated Bylaws, as amended (incorporated by reference to Exhibit 3.2 to the Martin Marietta Materials, Inc. Current Report on Form 8-K, filed on February 22, 2018) (Commission File No. 1-12744)
4.04	--Indenture dated as of December 1, 1995 between Martin Marietta Materials, Inc. and First Union National Bank of North Carolina (incorporated by reference to Exhibit 4(a) to the Martin Marietta Materials, Inc. registration statement on Form S-3 (SEC Registration No. 33-99082)) (P)
4.05	--Form of Martin Marietta Materials, Inc. 7% Debenture due 2025 (incorporated by reference to Exhibit 4(a)(i) to the Martin Marietta Materials, Inc. registration statement on Form S-3 (SEC Registration No. 33-99082)) (P)
4.06	--Indenture dated as of April 30, 2007 between Martin Marietta Materials, Inc. and Truist Bank (as successor by merger to SunTrust Bank and formerly known as Branch Banking and Trust Company, Inc.), as trustee (incorporated by reference to Exhibit 4.1 to the Martin Marietta Materials, Inc. Current Report on Form 8-K, filed on April 30, 2007 (Commission File No. 1-12744))

Exhibit No.	
4.07	--Second Supplemental Indenture, dated as of April 30, 2007, between Martin Marietta Materials, Inc. and Truist Bank, as trustee, to that certain Indenture dated as of April 30, 2007 between Martin Marietta Materials, Inc. and Truist Bank, as trustee, pursuant to which were issued $250,000,000 aggregate principal amount of 6¼% Senior Notes due 2037 of Martin Marietta Materials, Inc. (incorporated by reference to Exhibit 4.3 to the Martin Marietta Materials, Inc. Current Report on Form 8-K, filed on April 30, 2007 (Commission File No. 1-12744))
4.08	--Purchase Agreement dated as of June 23, 2014 among Martin Marietta Materials, Inc. and Deutsche Bank Securities Inc. and J.P. Morgan Securities LLC, as representatives of the several initial purchasers named in Schedule 1 thereto (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed on June 24, 2014) (Commission File No. 1-12744)
4.09	--Indenture, dated as of July 2, 2014, between Martin Marietta Materials, Inc. and Regions Bank, as trustee (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed on July 2, 2014) (Commission File No. 1-12744)
4.10	--Form of 4.250% Senior Notes due 2024 (included in Exhibit 4.09)
4.11	--Indenture, dated as of May 22, 2017, between Martin Marietta Materials, Inc. and Regions Bank, as trustee (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed on May 22, 2017) (Commission File No. 1-12744)
4.12	--First Supplemental Indenture, dated as of May 22, 2017, between Martin Marietta Materials, Inc. and Regions Bank, as trustee, governing the Senior Notes issued by the Company on May 22, 2017, in the form of the $300 million aggregate principal amount of Floating Rate Senior Notes due 2020 and $300 million aggregate principal amount of 3.450% Senior Notes due 2027 (incorporated by reference to Exhibit 4.2 to the Martin Marietta Materials, Inc. Current Report on Form 8-K, filed on May 22, 2017 (Commission File No. 1-12744))
4.13	--Form of Floating Rate Senior Notes due 2020 (included in Exhibit 4.12)
4.14	--Second Supplemental Indenture, dated as of December 20, 2017, between Martin Marietta Materials, Inc. and Regions Bank, as trustee, governing the Senior Notes issued by the Company on December 20, 2017, in the form of the $300 million aggregate principal amount of Floating Rate Senior Notes due 2019, $500 million aggregate principal amount of 3.500% Senior Notes due 2027, and $600 million aggregate principal amount of 4.250% Senior Notes due 2047 (incorporated by reference to Exhibit 4.2 to the Martin Marietta Materials, Inc. Current Report on Form 8-K, filed on December 20, 2017 (Commission File No. 1-12744))
4.15	--Form of 3.500% Senior Notes due 2027 (included in Exhibit 4.14)
4.16	--Form of 4.250% Senior Notes due 2047 (included in Exhibit 4.14)
*4.17	--Description of the Company's Capital Stock
10.01	--$700,000,000 Credit Agreement dated as of December 5, 2016 among Martin Marietta Materials, Inc., JPMorgan Chase Bank, N.A., as Administrative Agent, and Wells Fargo Bank, N.A., Truist Bank, and Deutsche Bank Securities Inc., as Co-Syndication Agents (incorporated by reference to Exhibit 10.01 to the Martin Marietta Materials, Inc., Current Report on Form 8-K filed on December 7, 2016) (Commission File No. 1-12744)
10.02	-- Credit and Security Agreement dated as of April 19, 2013, among Martin Marietta Funding LLC, as borrower, Martin Marietta Materials, Inc., as servicer, and Truist Bank, as lender, together with the other lenders from time to time party thereto, and Truist Bank, as administrative agent for the lenders (incorporated by reference to Exhibit 10.01 to the Martin Marietta Materials, Inc. Current Report on Form 8-K filed on April 24, 2013) (Commission File No. 1-12744)
10.03	--Commitment Letter dated as of June 20, 2014 to the Credit and Security Agreement, dated as of April 19, 2013 (as last amended April 18, 2014), among Martin Marietta Funding LLC, as borrower, Martin Marietta Materials, Inc., as servicer, and Truist Bank, as lender, together with the other lenders from time to time party thereto, and Truist Bank, as administrative agent for the lenders (incorporated by reference to Exhibit 10.01 to the Martin Marietta Materials, Inc. Current Report on Form 8-K filed on June 25, 2014) (Commission File No. 1-12744)

Exhibit No.	
10.04	--Second Amendment to Credit and Security Agreement, dated as of April 18, 2014, among Martin Marietta Funding LLC, as borrower, Martin Marietta Materials, Inc., as servicer, and Truist Bank, as lender, together with the other lenders from time to time party thereto, and Truist Bank, as administrative agent for the lenders (incorporated by reference to Exhibit 10.02 to the Martin Marietta Materials, Inc. Current Report on Form 8-K filed on April 24, 2014) (Commission File No. 1-12744)
10.05	--Fifth Amendment to Credit and Security Agreement, dated as of September 30, 2014, among Martin Marietta Funding LLC, as borrower, Martin Marietta Materials, Inc., as servicer, and Truist Bank, as lender, together with the other lenders from time to time party thereto, and Truist Bank, as administrative agent for the lenders (incorporated by reference to Exhibit 10.01 to the Martin Marietta Materials, Inc. Current Report on Form 8-K filed on October 3, 2014) (Commission File No. 1-12744)
10.06	--Seventh Amendment to Credit and Security Agreement, dated as of September 28, 2016, among Martin Marietta Funding LLC, as borrower, Martin Marietta Materials, Inc., as servicer, and Truist Bank, as lender, together with the other lenders from time to time party thereto, and Truist Bank, as administrative agent for the lenders (incorporated by reference to Exhibit 10.01 to the Martin Marietta Materials, Inc. Current Report on Form 8-K filed on September 30, 2016) (Commission File No. 1-12744)
10.07	--Ninth Amendment to Credit and Security Agreement, dated as of April 17, 2018, among Martin Marietta Funding LLC, as borrower, Martin Marietta Materials, Inc., as servicer, and Truist Bank, as lender, together with the other lenders from time to time party thereto, and Truist Bank, as administrative agent for the lenders (incorporated by reference to Exhibit 10.1 to the Martin Marietta Materials, Inc. Current Report on Form 8-K filed on April 17, 2018) (Commission File No. 1-12744)
10.08	--Tenth Amendment to Credit and Security Agreement, dated as of September 28, 2018, among Martin Marietta Funding LLC, as borrower, Martin Marietta Materials, Inc., as servicer, and Truist Bank, as lender, together with the other lenders from time to time party thereto, and Truist Bank, as administrative agent for the lenders (incorporated by reference to Exhibit 10.1 to the Martin Marietta Materials, Inc. Current Report on Form 8-K filed on September 25, 2018) (Commission File No. 1-12744)
10.09	--Eleventh Amendment to Credit and Security Agreement, dated as of September 24, 2019, among Martin Marietta Funding LLC, as borrower, Martin Marietta Materials, Inc., as servicer, and Truist Bank, as lender, together with the other lenders from time to time party thereto, and Truist Bank, as administrative agent for the lenders (incorporated by reference to Exhibit 10.1 to the Martin Marietta Materials, Inc. Current Report on Form 8-K filed on September 24, 2019) (Commission File No. 1-12744)
10.10	--Purchase and Contribution Agreement dated as of April 19, 2013, between Martin Marietta Materials, Inc., as seller and as servicer, and Martin Marietta Funding LLC, as buyer (incorporated by reference to Exhibit 10.02 to the Martin Marietta Materials, Inc. Current Report on Form 8-K filed on April 24, 2013) (Commission File No. 1-12744)
10.11	--Form of Martin Marietta Materials, Inc. Third Amended and Restated Employment Protection Agreement (incorporated by reference to Exhibit 10.01 to the Martin Marietta Materials, Inc. Current Report on Form 8-K, filed on August 19, 2008) (Commission File No. 1-12744)**
10.12	--Amended and Restated Martin Marietta Materials, Inc. Common Stock Purchase Plan for Directors (incorporated by reference to Exhibit 10.05 to the Martin Marietta Materials, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2013) (Commission File No. 1-12744)**
10.13	--Martin Marietta Materials, Inc. Amended and Restated Executive Incentive Plan (incorporated by reference to Exhibit 10.05 to the Martin Marietta Materials, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2008) (Commission File No. 1-12744)**
10.14	--Martin Marietta Materials, Inc. Incentive Stock Plan, as Amended (incorporated by reference to Exhibit 10.06 to the Martin Marietta Materials, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2008) (Commission File No. 1-12744)**
10.15	--Martin Marietta Amended and Restated Stock-Based Award Plan last amended and restated February 18, 2016 (incorporated by reference to Exhibit 10.01 to the Martin Marietta Materials, Inc. Quarterly Report on Form 10-Q for the quarter ended June 30, 2016) (Commission File No. 1-12744)**
10.16	--Martin Marietta Executive Cash Incentive Plan adopted February 18, 2016 (incorporated by reference to Exhibit 10.02 to the Martin Marietta Materials, Inc. Quarterly Report on Form 10-Q for the quarter ended June 30, 2016) (Commission File No. 1-12744)**

Exhibit No.	
10.17	--Martin Marietta Materials, Inc. Amended Omnibus Securities Award Plan (incorporated by reference to Exhibit 10.16 to the Martin Marietta Materials, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2000) (Commission File No. 1-12744)**
10.18	--Martin Marietta Materials, Inc. Third Amended and Restated Supplemental Excess Retirement Plan (incorporated by reference to Exhibit 10 to the Martin Marietta Materials, Inc. Quarterly Report on Form 10-Q for the quarter ended June 30, 2012) (Commission File No. 1-12744)**
10.19	--Form of Option Award Agreement under the Martin Marietta Materials, Inc. Amended and Restated Stock-Based Award Plan (incorporated by reference to Exhibit 10.11 to the Martin Marietta Materials, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2008) (Commission File No. 1-12744)**
10.20	--Form of Amendment to the Stock Unit Agreement under the Martin Marietta Materials, Inc. Amended and Restated Stock-Based Award Plan (incorporated by reference to Exhibit 10.13 to the Martin Marietta Materials, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2008) (Commission File No. 1-12744)**
10.21	--Form of Restricted Stock Unit Agreement for Directors under the Martin Marietta Materials, Inc. Amended and Restated Stock-Based Award Plan (incorporated by reference to Exhibit 10.14 to the Martin Marietta Materials, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2013) (Commission File No. 1-12744)**
10.22	--Form of Special Restricted Stock Unit Agreement under the Martin Marietta Materials, Inc. Amended and Restated Stock-Based Award Plan (incorporated by reference to Exhibit 10.19 to the Martin Marietta Materials, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2014) (Commission File No. 1-12744)**
10.23	--Form of Performance-Based Restricted Stock Unit Award Agreement under the Martin Marietta Materials, Inc. Amended and Restated Stock-Based Award Plan (incorporated by reference to Exhibit 10.02 to the Martin Marietta Materials, Inc. Quarterly Report on Form 10-Q for the quarter ended March 31, 2017) (Commission File No. 1-12744)**
10.24	--Offer Letter, dated as of June 9, 2017, by and between Martin Marietta Materials, Inc. and James A. J. Nickolas (incorporated by reference to Exhibit 10.01 to the Martin Marietta Materials, Inc. Quarterly Report on Form 10-Q for the quarter ended June 30, 2018) (Commission File No. 1-12744)**
10.25	--Form of First Amendment to the Martin Marietta Materials, Inc. Third Amended and Restated Employment Protection Agreement (incorporated by reference to Exhibit 10.1 to the Martin Marietta Materials, Inc. Current Report on Form 8-K, filed on December 18, 2018) (Commission File No. 1-12744)**
10.26	--Form of Restricted Stock Unit Award Agreement under the Martin Marietta Materials, Inc. Amended and Restated Stock-Based Award Plan (incorporated by reference to Exhibit 10.2 to the Martin Marietta Materials, Inc. Current Report on Form 8-K, filed on December 18, 2018) (Commission File No. 1-12744)**
10.27	--Form of Performance Share Unit Award Agreement under the Martin Marietta Materials, Inc. Amended and Restated Stock-Based Award Plan (incorporated by reference to Exhibit 10.3 to the Martin Marietta Materials, Inc. Current Report on Form 8-K, filed on December 18, 2018) (Commission File No. 1-12744)**
10.28	--Form of Directors' Restricted Stock Unit Award Agreement under the Martin Marietta Materials, Inc. Amended and Restated Stock-Based Award Plan (incorporated by reference to Exhibit 10.27 to the Martin Marietta Materials, Inc. Annual Report on Form 10-K for the fiscal year ended December 31, 2018) (Commission File No. 1-12744)**
10.29	--Offer Letter, dated as of January 11, 2019, by and between Martin Marietta Materials, Inc. and Robert J. Cardin (incorporated by reference to Exhibit 10.01 to the Martin Marietta Materials, Inc. Quarterly Report on Form 10-Q for the quarter ended June 30, 2019) (Commission File No. 1-12744)**
*21.01	--List of subsidiaries of Martin Marietta Materials, Inc.
*23.01	--Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm for Martin Marietta Materials, Inc. and consolidated subsidiaries
*24.01	--Powers of Attorney (included in this Form 10-K immediately following Signatures)
*31.01	--Certification dated February 21, 2020 of Chief Executive Officer pursuant to Securities and Exchange Act of 1934, rule 13a-14, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
*31.02	--Certification dated February 21, 2020 of Chief Financial Officer pursuant to Securities and Exchange Act of 1934, rule 13a-14, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
*32.01	--Certification dated February 21, 2020 of Chief Executive Officer required by 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Exhibit No.	
*32.02	--Certification dated February 21, 2020 of Chief Financial Officer required by 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
*95	--Mine Safety Disclosure Exhibit
*101	--The following financial information formatted in Inline XBRL:
*101.INS	--XBRL Instance Document
*101.SCH	--XBRL Taxonomy Extension Schema Document
*101.CAL	--XBRL Taxonomy Extension Calculation Linkbase Document
*101.LAB	--XBRL Taxonomy Extension Label Linkbase Document
*101.PRE	--XBRL Taxonomy Extension Presentation Linkbase Document
*101. DEF	--XBRL Taxonomy Extension Definition Linkbase
*104	--The cover page financial information formatted in Inline XBRL (included as Exhibit 101).

Other material incorporated by reference:

Martin Marietta Materials, Inc.'s 2020 Proxy Statement to be filed pursuant to Regulation 14A, portions of which are incorporated by reference in this Form 10-K. Those portions of the 2020 Proxy Statement which are not incorporated by reference shall not be deemed to be "filed" as part of this report.

* Filed herewith

** Management contract or compensatory plan or arrangement required to be filed as an exhibit pursuant to Item 14(c) of Form 10-K

(c) Financial Statement Schedule

SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS

MARTIN MARIETTA MATERIALS, INC. AND CONSOLIDATED SUBSIDIARIES

Col A	Col B	Col C		Col D	Col E
		Additions			
Description	Balance at beginning of period	(1) Charged to costs and expenses	(2) Charged to other accounts-describe	Deductions-describe	Balance at end of period
			(Amounts in Millions)		
Year ended December 31, 2019					
Allowance for doubtful accounts	$ 3.3	$ 1.4	$ —	$ —	$ 4.7
Allowance for uncollectible notes receivable	—	—	—	—	—
Inventory valuation allowance	159.2	38.8	—	29.4 (a)	168.6
Year ended December 31, 2018					
Allowance for doubtful accounts	$ 2.4	$ 0.9	$ —	$ —	$ 3.3
Allowance for uncollectible notes receivable	0.2	—	—	0.2 (b)	—
Inventory valuation allowance	144.0	36.9	5.1 (c)	26.8 (a)	159.2
Year ended December 31, 2017					
Allowance for doubtful accounts	$ 6.3	$ —	$ —	$ 3.9 (b)	$ 2.4
Allowance for uncollectible notes receivable	0.4	—	—	0.2 (b)	0.2
Inventory valuation allowance	134.9	38.5	—	29.4 (a)	144.0

(a) Sale of reserved inventory and divestitures
(b) Write-off of uncollectible accounts and change in estimates
(c) Application of reserve policy to acquired inventories

ITEM 16 – FORM 10-K SUMMARY

The Company has chosen not to include an optional summary of the information required by this Form 10-K. For a reference to the information in this Form 10-K, investors should refer to the Table of Contents to this Form 10-K.

SIGNATURES

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

MARTIN MARIETTA MATERIALS, INC.

By: /s/ Roselyn R. Bar

Roselyn R. Bar
Executive Vice President, General Counsel and Corporate Secretary

Dated: February 21, 2020

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below appoints Roselyn R. Bar and M. Guy Brooks, III, jointly and severally, as his or her true and lawful attorney-in-fact, each with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact, jointly and severally, full power and authority to do and perform each in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, jointly and severally, or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Signatures

Pursuant to the requirements of the Securities and 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:

Signature	*Title*	*Date*
/s/ C. Howard Nye C. Howard Nye	Chairman of the Board, President and Chief Executive Officer	February 21, 2020
/s/ James A. J. Nickolas James A. J. Nickolas	Senior Vice President and Chief Financial Officer	February 21, 2020
/s/ Robert J. Cardin Robert J. Cardin	Senior Vice President, Controller and Chief Accounting Officer	February 21, 2020
/s/ Dorothy M. Ables Dorothy M. Ables	Director	February 21, 2020
/s/ Sue W. Cole Sue W. Cole	Director	February 21, 2020
/s/ Smith W. Davis Smith W. Davis	Director	February 21, 2020
/s/ John J. Koraleski John J. Koraleski	Director	February 21, 2020
/s/ Laree E. Perez Laree E. Perez	Director	February 21, 2020
/s/ Thomas H. Pike Thomas H. Pike	Director	February 21, 2020
/s/ Michael J. Quillen Michael J. Quillen	Director	February 21, 2020
/s/ Donald W. Slager Donald W. Slager	Director	February 21, 2020
/s/ Stephen P. Zelnak, Jr. Stephen P. Zelnak, Jr.	Director	February 21, 2020

Exhibit 4.17

DESCRIPTION OF THE COMPANY'S CAPITAL STOCK

The following summarizes the material terms of the capital stock of Martin Marietta Materials, Inc. ("Martin Marietta"). Martin Marietta is a corporation incorporated under the laws of the State of North Carolina, and accordingly its internal corporate affairs are governed by North Carolina law and by its Restated Articles of Incorporation, as amended (the "Charter"), and its Bylaws, as amended (the "Bylaws"), which are filed as exhibits to Martin Marietta's most recent Annual Report on Form 10-K filed with the Securities and Exchange Commission and available at www.sec.gov. The following summary is qualified in its entirety by reference to the applicable provisions of North Carolina law and the Charter and the Bylaws, which are subject to future amendment in accordance with the provisions thereof. Martin Marietta common stock is the only class of securities of Martin Marietta registered under Section 12 of the Securities Exchange Act of 1934, as amended.

Authorized Capital Stock

Martin Marietta's authorized capital stock consists of 100,000,000 shares of common stock, par value $0.01 per share, and 10,000,000 shares of preferred stock, par value $0.01 per share, of which 100,000 have been designated Class A preferred stock and 200,000 have been designated Class B preferred stock. The number of shares of Martin Marietta common stock issued and outstanding as of a recent date is set forth on the cover page of the most recent Annual Report on Form 10-K filed by Martin Marietta with the Securities and Exchange Commission. As of the same date, Martin Marietta had no issued and outstanding shares of preferred stock.

Common Stock

Each holder of a share of Martin Marietta common stock is entitled to one vote for each share held of record on the applicable record date on each matter voted on at a meeting of shareholders. The holders of Martin Marietta common stock have no preemptive rights and no rights to convert their common stock into any other securities. There are also no redemption or sinking fund provisions applicable to the Martin Marietta common stock.

Holders of Martin Marietta common stock are entitled to receive dividends as may be declared from time to time by Martin Marietta's board of directors out of funds legally available therefor. Holders of Martin Marietta common stock are entitled to share pro rata, upon any liquidation or dissolution of Martin Marietta, in all remaining assets available for distribution to shareholders after payment or providing for Martin Marietta's liabilities and the liquidation preference of any outstanding preferred stock. The rights, preferences and privileges of the holders of Martin Marietta common stock are subject to and may be adversely affected by the rights of holders of shares of Class A preferred stock and Class B preferred stock, and any other series of Martin Marietta's preferred stock that Martin Marietta may designate and issue in the future.

Class A Preferred Stock and Class B Preferred Stock

Ranking. If and when issued, each of Martin Marietta's Class A preferred stock and Class B preferred stock would rank ahead of its common stock with respect to the payment of dividends and the distribution of assets in the event of Martin Marietta's liquidation or dissolution. Each of the Class A preferred stock and the Class B preferred stock would rank junior to all other series of Martin Marietta's preferred stock as to the payment of dividends and the distribution of assets, unless the terms of any such series provide otherwise.

Dividends. Subject to the prior and superior rights of any shares of any series of preferred stock ranking prior and superior to the shares of Class A preferred stock and Class B preferred stock with respect to dividends, any holders of shares of Class A preferred stock and Class B preferred stock would receive when, as and if declared by Martin Marietta's board of directors quarterly dividends out of funds legally available for the purpose, which would accrue and be cumulative. Dividends would be payable in an amount per one one-thousandth of a share equal to one times the aggregate per share amount of all cash and non-cash dividends declared on the common stock and on the first day of January, April, July and October in each year, commencing, with respect to Class A preferred stock and Class B preferred stock, on the first quarterly dividend payment date after the first issuance of a share or fraction of a share of that class of preferred stock.

So long as any dividends or distributions payable on Class A preferred stock or Class B preferred stock are in arrears, no shares may be repurchased and no dividends may be declared or paid with respect to shares ranking junior to Class A preferred stock or Class B preferred stock, including Martin Marietta common stock.

Voting Rights. Holders of shares of each of Martin Marietta's Class A preferred stock and Class B preferred stock would be entitled to vote as one voting class with the holders of Martin Marietta common stock on all matters submitted to a vote of Martin Marietta shareholders. Each one-thousandth of a share of Class A preferred stock and Class B preferred stock would entitle the holder to one vote on all matters submitted to a vote of Martin Marietta shareholders. In the event that Martin Marietta at any time declares any dividend on common stock payable in shares of common stock, subdivides the outstanding common stock or combines the outstanding common stock into a smaller number of shares, the number of votes per share to which holders of shares of Class A preferred stock and Class B preferred stock would be entitled to immediately prior to such event shall be adjusted by multiplying such number by a fraction the numerator of which is the shares of common stock outstanding immediately after such event and the denominator of which is the number of shares of common stock that would be outstanding immediately prior to such event.

If at any time dividends on any Class A preferred stock or Class B preferred stock are in arrears in an amount equal to four quarterly dividends, all holders of preferred stock with

dividends in arrears in an amount equal to four quarterly dividends, voting as a class, will have the right to elect two directors. Except as set forth in the articles of amendment with respect to the Class A preferred stock and the Class B preferred stock, holders of Class A preferred stock or Class B preferred stock shall have no special voting rights with respect to such shares and their consent shall not be required (except to the extent they are entitled to vote with holders of common stock as set forth herein) for taking any corporate action.

If an alteration, amendment or repeal of any provision of the Charter would materially alter or change any of the powers, preferences or special rights of the Class A preferred stock or the Class B preferred stock, the affirmative vote of the holders of a majority of the outstanding shares of each such class of preferred stock so affected, voting separately as a class, would be required.

Rights upon Liquidation, Dissolution or Winding Up. In the event of any voluntary or involuntary liquidation, dissolution or winding up of Martin Marietta, holders of Class A preferred stock and Class B preferred stock would be entitled to receive, before any distribution is made to the holders of common stock or any other series of stock ranking junior to such class of preferred stock, a liquidation preference in the amount of $10.00 per share (which is equal to $0.01 per one one-thousandth of a share), plus an amount equal to accrued and unpaid dividends and distributions. Thereafter, the holders of Class A preferred stock and Class B preferred stock would be entitled to receive an aggregate amount per one one-thousandth of a share equal to one times the aggregate amount to be distributed per share to holders of shares of common stock. Following the payment of the foregoing, the holders of Class A preferred stock and Class B preferred stock and holders of shares of common stock shall receive their ratable and proportionate share of the remaining assets to be distributed. In the event that there are not sufficient assets to permit payment in full of the Class A preferred stock and the Class B preferred stock liquidation preference and the liquidation preferences of all other series of preferred stock, if any, which rank on parity with the Class A preferred stock and the Class B preferred stock, then such remaining assets would be distributed ratably to the holders of such parity shares in proportion to their respective liquidation preference.

Redemption. Shares of Class A preferred stock and Class B preferred stock are not redeemable.

Additional Classes or Series of Preferred Stock

The Charter permits Martin Marietta's board of directors, without further action by the shareholders, to issue one or more additional series of preferred stock with such designations, preferences, limitations and relative rights as the board of directors may determine from time to time. Accordingly, without action by the shareholders, Martin Marietta's board of directors may designate and authorize the issuance of additional classes or series of preferred stock having voting rights, dividend rights, conversion rights, redemption provisions (including sinking fund provisions) and rights in liquidation, dissolution or winding up that are superior to those of Martin Marietta's common stock.

Charter and Bylaw Provisions; Takeover Statutes

A number of provisions in the Charter, the Bylaws and the North Carolina Business Corporations Act (the "NCBCA") may make it more difficult to acquire control of Martin Marietta or remove its management.

Removal of Directors. Directors may be removed only for cause by a majority vote of the shareholders. Cause for removal is deemed to exist only if the director has been convicted in a court of competent jurisdiction of a felony or has been adjudged by a court of competent jurisdiction to be liable for fraudulent or dishonest conduct, or gross abuse of authority or discretion, with respect to Martin Marietta, and such conviction or adjudication has become final and non-appealable. If a director is elected by a voting group of Martin Marietta shareholders, only such shareholders may participate in the vote to remove such director.

Approval of Certain Share Repurchases, Mergers, Consolidations, Sales and Leases . The Charter requires any purchase by Martin Marietta of shares of its voting stock from an interested shareholder (as defined below) who has beneficially owned such securities for less than two years prior to the date of such purchase or any agreement to purchase, other than pursuant to an offer to all shareholders of the same class of shares, at a per share price in excess of the market price, be approved by the affirmative vote of the holders of a majority of Martin Marietta's voting stock not beneficially owned by the interested shareholder, voting together as a single class.

In addition, the Charter requires Martin Marietta to get the approval of not less than 66-2/3% of its voting stock not beneficially owned by an interested shareholder and 80% of all of its voting stock, in addition to any vote required by law, before Martin Marietta may enter into various transactions with interested shareholders, including the following:

- any merger or consolidation of Martin Marietta or any of its subsidiaries with (i) any interested shareholder or (ii) any other corporation (whether or not itself an interested shareholder) which is, or after such merger or consolidation would be, an affiliate of an interested shareholder;

- any sale, lease, exchange, mortgage, pledge, transfer, or other disposition to or with any interested shareholder or any affiliate of any interested shareholder of any of Martin Marietta's assets or any of its subsidiaries having an aggregate fair market value of $10,000,000 or more;

- the issuance or transfer by Martin Marietta or any of its subsidiaries of any of Martin Marietta's equity securities (including any security convertible into equity securities) or any of its subsidiaries having an aggregate fair market value of $10,000,000 or more to any interested shareholder or any affiliate of any interested shareholder in exchange for cash, securities, and/or other property;

- the adoption of any plan or proposal for the liquidation or dissolution of Martin Marietta proposed by or on behalf of an interested shareholder or any affiliate of any interested shareholder; or

- any reclassification of securities or recapitalization of Martin Marietta, or any merger or consolidation of Martin Marietta with any of its subsidiaries, or any other transaction (whether or not involving an interested shareholder) which has the effect, directly or indirectly, of increasing the proportionate share of the outstanding shares of any class of equity (including any securities convertible into equity securities) securities of Martin Marietta or any of its subsidiaries that are directly or indirectly owned by any interested shareholder or any affiliate of any interested shareholder.

However, no such vote is required for any transaction approved by a majority of Martin Marietta's disinterested directors or for the purchase by Martin Marietta of shares of voting stock from an interested shareholder unless such vote is required by the provision described in the first paragraph of this subsection.

The Charter defines an interested shareholder as any individual, firm, corporation, partnership, or other entity who or that:

- is the beneficial owner, directly or indirectly, of five percent or more of Martin Marietta's outstanding voting stock;

- is an affiliate of Martin Marietta and at any time within the two-year period immediately prior to the date as of which a determination is being made was the beneficial owner, directly or indirectly, of five percent or more of Martin Marietta's outstanding voting stock; or

- is an assignee of or successor to any shares of Martin Marietta's voting stock that were at any time within the immediately prior two-year period beneficially owned by any person described in above if such assignment or succession occurred in the course of one or more transactions not involving a public offering.

Advance Notice of Proposals and Nominations. The Bylaws provide that shareholders must provide timely written notice to bring business before an annual meeting of shareholders or to nominate candidates for election as directors at an annual meeting of shareholders. Generally, to be timely, notice for an annual meeting must be received at Martin Marietta's principal office not less than 60 days nor more than 90 days prior to the first anniversary of the mailing of the preceding year's proxy statement in connection with the annual meeting of Martin Marietta shareholders. The Bylaws also specify the form and content of a shareholder's notice. These provisions may prevent shareholders from bringing matters before an annual meeting of shareholders or from nominating candidates for election as directors at an annual meeting of shareholders.

Limits on Special Meetings. A special meeting of the shareholders of Martin Marietta may be called only by the chairman of its board of directors, its president, or by its board of directors or executive committee.

Takeover Statutes. The NCBCA includes two takeover-related statutes: the Shareholder Protection Act and the Control Share Acquisition Act. The Shareholder Protection Act restricts business combination transactions involving a North Carolina public corporation and a beneficial owner of 20 percent or more of its voting stock. The Control Share Acquisition Act precludes an acquirer of the shares of a North Carolina public corporation who crosses one of three voting thresholds, 20 percent, 33-1/3 percent or 50 percent, from obtaining voting control of the shares unless a majority in interest of the disinterested shareholders of the corporation votes to grant voting power to the shares. Neither of these statutes applies to Martin Marietta because, as permitted by these statutes, Martin Marietta elected not to be covered by them and included a provision in its initial articles of incorporation reflecting that election.

Transfer Agent

The transfer agent and registrar for Martin Marietta's common stock is the American Stock Transfer & Trust Company.

EXHIBIT 21.01

SUBSIDIARIES OF MARTIN MARIETTA MATERIALS, INC.

AS OF JANUARY 31, 2020

Name of Subsidiary	**Percent Owned**
Alamo Gulf Coast Railroad Company, a Texas corporation	99.5%[1]
Alamo North Texas Railroad Company, a Texas corporation	99.5%[2]
American Aggregates Corporation, a North Carolina corporation	100%
American Materials Technologies, LLC, a Tennessee limited liability company	100%[3]
American Stone Company, a North Carolina corporation	50%[4]
Bahama Rock Limited, a Bahamas corporation	100%
Bluegrass – Blue Mount, LLC, a Delaware limited liability company	100%[5]
Bluegrass Materials Company, LLC, a Delaware limited liability company	100%[6]
Bluegrass-St. Marys, LLC, a Delaware limited liability company	100%[7]
Brookhollow of Alexandria, Inc., a Louisiana corporation	100%[8]
Brookhollow Corporation, a Delaware corporation	100%[9]
Brook Hollow Properties, Inc., a Texas corporation	100%[10]
California Natural Aggregates, Inc., a California corporation	100%[11]
Campbell’s C-Ment Contracting, Inc., a Colorado corporation	100%[12]

[1] Alamo Gulf Coast Railroad Company is owned by Martin Marietta Materials Southwest, LLC, (99.5%) and certain individuals (0.5%).
[2] Alamo North Texas Railroad Company is owned by Martin Marietta Materials Southwest, LLC, (99.5%) and certain individuals (0.5%).
[3] American Materials Technologies, LLC is a wholly owned subsidiary of Meridian Aggregates Company, a Limited Partnership.
[4] Martin Marietta Materials, Inc. owns a 50% interest in American Stone Company.
[5] Bluegrass – Blue Mount, LLC is a wholly owned subsidiary of Bluegrass Materials Company, LLC.
[6] Bluegrass Materials Company, LLC is a wholly owned subsidiary of Panadero Midco, LLC.
[7] Bluegrass-St. Marys, LLC is a wholly owned subsidiary of Bluegrass Materials Company, LLC.
[8] Brookhollow of Alexandria, Inc. is a wholly owned subsidiary of Brookhollow Corporation.
[9] Brookhollow Corporation is a wholly owned subsidiary of Texas Industries, Inc.
[10] Brook Hollow Properties, Inc. is a wholly owned subsidiary of Brookhollow Corporation.
[11] California Natural Aggregates, Inc. is a wholly owned subsidiary of Texas Industries, Inc.
[12] Campbell’s C-Ment Contracting, Inc. is a wholly-owned subsidiary of Suburban Acquisition Company.

CIG MC LLC, a Colorado limited liability company	100%
Creole Corporation, a Delaware corporation	100%[13]
FRI Ready Mix of Tennessee, LLC, a Florida limited liability company	100%[14]
Front Range Aggregates LLC, a Delaware limited liability company	100%
Granite Canyon Quarry, a Wyoming joint venture	100%[15]
Harding Street Corporation, a North Carolina corporation	100%
HSMM LLC, a North Carolina limited liability company	100%
Kent Sand & Gravel Company, LLC, a Delaware limited liability company	100%[16]
Mardell Trucking Company, Inc., a Delaware corporation	100%[17]
Martin Marietta Bluegrass, LLC, a Delaware corporation	100%[18]
Martin Marietta Composites, Inc., a Delaware corporation	100%
Martin Marietta Fleet Management LLC, a North Carolina limited liability company	100%[19]
Martin Marietta Funding LLC, a Delaware limited liability company	100%
Martin Marietta Inc., a North Carolina corporation	100%
Martin Marietta Kansas City, LLC, a Delaware limited liability company	100%[20]
Martin Marietta Magnesia Specialties, LLC, a Delaware limited liability company	100%
Martin Marietta Materials Canada Limited, a Nova Scotia, Canada corporation	100%
Martin Marietta Materials of Missouri, Inc., a Delaware corporation	100%
Martin Marietta Materials Real Estate Investments, Inc., a North Carolina corporation	100%

[13] Creole Corporation is a wholly owned subsidiary of Texas Industries, Inc.
[14] FRI Ready Mix of Tennessee, LLC is a wholly owned subsidiary of American Materials Technologies, LLC.
[15] Granite Canyon Quarry is owned 51% by Meridian Granite Company and 49% by Martin Marietta Materials Real Estate Investments, Inc.
[16] Kent Sand & Gravel Company, LLC is a wholly owned subsidiary of Bluegrass Materials Company, LLC.
[17] Mardell Trucking Company, Inc. is owned 50% by Bluegrass Materials Company, LLC and 50% by Petrillo Brothers, Inc.
[18] Martin Marietta Bluegrass, LLC is owned 61.61% by Panadero Corp. and 38.39% by Martin Marietta Materials, Inc.
[19] Martin Marietta Fleet Management LLC, is a wholly owned subsidiary of Martin Marietta Materials Southwest, LLC
[20] Martin Marietta Kansas City, LLC is owned 95% by Martin Marietta Materials, Inc. and 5% by Martin Marietta Materials of Missouri, Inc.

Martin Marietta Materials Southwest, LLC, a Texas limited liability company	100%[21]
Material Producers, Inc., an Oklahoma corporation	100%[22]
Maryland Materials, Inc., a Delaware corporation	100%[23]
Meridian Aggregates Company, a Limited Partnership, a North Carolina limited partnership	100%[24]
Meridian Aggregates Company Northwest, LLC, a North Carolina limited liability company	100%
Meridian Aggregates Company Southwest, LLC, a North Carolina limited liability company	100%[25]
Meridian Aggregates Investments, LLC, a North Carolina limited liability company	100%[26]
Meridian Granite Company, a North Carolina corporation	100%[27]
Mid-State Construction & Materials, Inc., an Arkansas corporation	100%
MTD Pipeline LLC, a Delaware limited liability company	50%[28]
North East Land and Material Company, Inc., a Maryland corporation	100%[29]
Panadero Corp., a Delaware corporation	100%
Panadero Midco, LLC, a Delaware limited liability company	100%[30]
Partin Limestone Products, Inc., a California corporation	100%[31]
Petrillo Brothers, Inc., a Delaware corporation	100%[32]
Powderly Transportation, Inc., a North Carolina corporation	100%[33]

[21] Martin Marietta Materials Southwest, LLC is a wholly owned subsidiary of Texas Industries, Inc.
[22] Material Producers, Inc. is a wholly owned subsidiary of Martin Marietta Materials Southwest, LLC
[23] Maryland Materials, Inc. is owned 50% by Bluegrass Materials Company, LLC and 50% by Petrillo Brothers, Inc.
[24] Meridian Aggregates Company, a Limited Partnership, is owned 98% by Meridian Aggregates Investments, LLC. The remaining 2% is owned by Martin Marietta Materials, Inc.
[25] Martin Marietta Materials Southwest, LLC is the sole member of Meridian Aggregates Company Southwest, LLC.
[26] Meridian Aggregates Investments, LLC is owned 99% by Martin Marietta Materials, Inc. and 1% by Martin Marietta Materials Real Estate Investments, Inc.
[27] Meridian Granite Company is a wholly owned subsidiary of Meridian Aggregates Company, a Limited Partnership.
[28] Martin Marietta Magnesia Specialties, LLC, a wholly owned subsidiary of Martin Marietta Materials, Inc., owns a 50% interest in MTD Pipeline LLC.
[29] North East Land and Material Company, Inc. is a wholly owned subsidiary of Maryland Materials, Inc.
[30] Panadero Midco, LLC is a wholly owned subsidiary of Martin Marietta Bluegrass, LLC.
[31] Partin Limestone Products, Inc. is a wholly owned subsidiary of Riverside Cement Company.
[32] Petrillo Brothers, Inc. is a wholly owned subsidiary of Bluegrass Materials Company, LLC.
[33] Powderly Transportation, Inc. is a wholly owned subsidiary of Meridian Aggregates Company, a Limited Partnership.

R&S Sand & Gravel, LLC, a North Carolina limited liability company	100%[34]
Ratliff Mix Management, LLC, a Texas limited liability company	100%[35]
Ratliff Ready-Mix, LP, a Texas limited partnership	100%[36]
Riverside Cement Company, a California partnership	100%[37]
Riverside Cement Holdings Company, a Delaware corporation	100%[38]
Rock & Rail LLC, a Colorado limited liability company	100%
Rocky Mountain Materials and Asphalt, Inc., a Colorado corporation	100%
Rocky Mountain Premix, Inc., a Colorado corporation	100%
Rocky Mountain Ready Mix Concrete, Inc., a Colorado corporation	100%[39]
Royal Gorge Express, LLC, a Colorado Limited Liability Company	50%[40]
Southwestern Financial Corporation, a Texas Corporation	100%[41]
St. Marys Sand Company, LLC, a Delaware limited liability company	100%[42]
Suburban Acquisition Company, a Colorado corporation	100%
Texas Industries Holdings, LLC, a Delaware limited liability company	100%[43]
Texas Industries, Inc., a Delaware corporation	100%
Texas Industries Trust, a Delaware trust	100%[44]
Theodore Holding, LLC, a Delaware limited liability company	60.7%[45]
TXI Aviation, Inc. dba TXI Retail, a Texas corporation	100%[46]

[34] Martin Marietta Materials, Inc. is the manager of and owns a 90% interest in R&S Sand & Gravel, LLC. The other 10% is owned by Harding Street Corporation, a wholly owned subsidiary of Martin Marietta Materials, Inc.
[35] Ratliff Mix Management, LLC is a wholly owned subsidiary of TXI Operations, LP.
[36] Ratliff Ready-Mix, LP is owned 99% by TXI Operations, LP and 1% by Ratliff Mix Management, LLC.
[37] Riverside Cement Company is owned 49% by TXI California, Inc. and 51% by TXI Riverside Inc.
[38] Riverside Cement Holdings Company is a wholly owned subsidiary of Riverside Cement Company.
[39] Rocky Mountain Ready Mix Concrete, Inc. is a wholly owned subsidiary of Campbell's C-Ment Contracting, Inc.
[40] Rock & Rail LLC, a wholly owned subsidiary of Martin Marietta Materials, Inc., owns a 50% interest in Royal Gorge Express, LLC
[41] Southwestern Financial Corporation is a wholly owned subsidiary of TXI Operations, LP.
[42] St. Marys Sand Company, LLC is a wholly owned subsidiary of Bluegrass-St. Marys, LLC.
[43] Texas Industries Holdings, LLC is a wholly owned subsidiary of Texas Industries, Inc.
[44] Texas Industries Trust is owned 100% by Texas Industries Holdings, LLC.
[45] Martin Marietta Materials, Inc. is the manager of and owns a 60.7% interest in Theodore Holdings, LLC.
[46] TXI Aviation, Inc. is a wholly owned subsidiary of Texas Industries, Inc.

TXI California Inc., a Delaware corporation	100%[47]
TXI Cement Company, a Delaware corporation	100%[48]
TXI LLC, a Delaware limited liability company	100%[49]
TXI Operating Trust, a Delaware trust	100%[50]
TXI Operations, LP, a Delaware limited partnership	100%[51]
TXI Power Company, a Texas corporation	100%[52]
TXI Riverside Inc., a Delaware corporation	100%[53]
TXI Transportation Company, a Texas corporation	100%[54]
Valley Stone LLC, a Virginia limited liability company	50%[55]

[47] TXI California Inc. is a wholly owned subsidiary of Texas Industries, Inc.
[48] TXI Cement Company is a wholly owned subsidiary of Texas Industries, Inc.
[49] TXI, LLC is a wholly owned subsidiary of Texas Industries, Inc.
[50] TXI Operating Trust is owned 100% by TXI LLC.
[51] TXI Operations, LP is owned 99% by Texas Industries Trust and owned 1% by TXI Operating Trust.
[52] TXI Power Company is a wholly owned subsidiary of Texas Industries, Inc.
[53] TXI Riverside Inc. is a wholly owned subsidiary of Texas Industries, Inc.
[54] TXI Transportation Company is a wholly owned subsidiary of Texas Industries, Inc.
[55] Martin Marietta Materials, Inc. is the manager of and owns a 50% interest in Valley Stone LLC.

EXHIBIT 23.01

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-115918, 333-85608, 333-15429, 333-211735, and 333-197201) and Form S-3 (No. 333-217991) of Martin Marietta Materials, Inc. of our report dated February 21, 2020 relating to the financial statements and financial statement schedules and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP
Raleigh, North Carolina
February 21, 2020

EXHIBIT 31.01

CERTIFICATION PURSUANT TO SECURITIES AND EXCHANGE ACT OF 1934

RULE 13a-14 AS ADOPTED PURSUANT TO SECTION 302 OF THE

SARBANES-OXLEY ACT OF 2002

CERTIFICATIONS

I, C. Howard Nye, certify that:

1. I have reviewed this Form 10-K of Martin Marietta Materials, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 21, 2020

By: /s/ C. Howard Nye
C. Howard Nye
Chairman, President and
Chief Executive Officer

EXHIBIT 31.02

CERTIFICATION PURSUANT TO SECURITIES AND EXCHANGE ACT OF 1934

RULE 13a-14 AS ADOPTED PURSUANT TO SECTION 302 OF THE

SARBANES-OXLEY ACT OF 2002

CERTIFICATIONS

I, James A. J. Nickolas, certify that:

1. I have reviewed this Form 10-K of Martin Marietta Materials, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 21, 2020

By: /s/ James A. J. Nickolas
James A. J. Nickolas
Senior Vice President and
Chief Financial Officer

EXHIBIT 32.01

WRITTEN STATEMENT PURSUANT TO 18 U.S.C. 1350,

AS ADOPTED PURSUANT TO SECTION 906 OF THE

SARBANES-OXLEY ACT OF 2002

In connection with the 2019 Annual Report on Form 10-K (the "Report") of Martin Marietta Materials, Inc. (the "Registrant"), as filed with the Securities and Exchange Commission, I, C. Howard Nye, the Chief Executive Officer of the Registrant, certify that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

/s/ C. Howard Nye
C. Howard Nye
Chief Executive Officer

Date: February 21, 2020

A signed original of this written statement required by Section 906 has been provided to Martin Marietta Materials, Inc. and will be retained by Martin Marietta Materials, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 32.02

WRITTEN STATEMENT PURSUANT TO 18 U.S.C. 1350,

AS ADOPTED PURSUANT TO SECTION 906 OF THE

SARBANES-OXLEY ACT OF 2002

In connection with the 2019 Annual Report on Form 10-K (the "Report") of Martin Marietta Materials, Inc. (the "Registrant"), as filed with the Securities and Exchange Commission, I, James A. J. Nickolas, the Chief Financial Officer of the Registrant, certify that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

/s/ James A. J. Nickolas
James A. J. Nickolas
Chief Financial Officer

Date: February 21, 2020

A signed original of this written statement required by Section 906 has been provided to Martin Marietta Materials, Inc. and will be retained by Martin Marietta Materials, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT 95

MINE SAFETY DISCLOSURE EXHIBIT

The operation of the Company's U.S. aggregate quarries and mines (including the mining operations of the cement product line) is subject to regulation by the federal Mine Safety and Health Administration (MSHA) under the Federal Mine Safety and Health Act of 1977 (the "Mine Act"). MSHA inspects the Company's quarries and mines (and cement plants) on a regular basis and issues various citations and orders when it believes a violation has occurred under the Mine Act. Whenever MSHA issues a citation or order, it also generally proposes a civil penalty, or fine, related to the alleged violation. Citations or orders can be contested and appealed, and as part of that process, are often reduced in severity and amount, and are sometimes dismissed.

Under the Dodd-Frank Wall Street Reform and Consumer Protection Act (the Dodd-Frank Act), the Company is required to present information regarding certain mining safety and health citations which MSHA has issued with respect to its aggregates mining operations in its periodic reports filed with the Securities and Exchange Commission (the "SEC"). In evaluating this information, consideration should be given to factors such as: (i) the number of citations and orders will vary depending on the size of the quarry or mine and type of operations (underground or surface), (ii) the number of citations issued will vary from inspector to inspector and location to location, and (iii) citations and orders can be contested and appealed, and in that process, may be reduced in severity and amount, and are sometimes dismissed.

We have provided information below in response to the rules and regulations of the SEC issued under Section 1503(a) of the Dodd-Frank Act. The disclosures reflect U.S. mining operations only, as the requirements of the Dodd-Frank Act and the SEC rules and regulations thereunder do not apply to our quarries and mines operated outside the United States.

The Company presents the following items regarding certain mining safety and health matters for the year ended December 31, 2019 (Appendix 1):

- Total number of violations of mandatory health or safety standards that could significantly and substantially contribute to the cause and effect of a mine safety or health hazard under section 104 of the Mine Act for which the Company received a citation from MSHA (hereinafter, "Section 104 S&S Citations"). If MSHA determines that a violation of a mandatory health or safety standard is reasonably likely to result in a reasonably serious injury or illness under the unique circumstance contributed to by the violation, MSHA will classify the violation as a "significant and substantial" violation (commonly referred to as a "S&S" violation). MSHA inspectors will classify each citation or order written as a "S&S" violation or not.
- Total number of orders issued under section 104(b) of the Mine Act (hereinafter, " Section 104(b) Orders"). These orders are issued for situations in which MSHA determines a previous violation covered by a Section 104(a) citation has not been totally abated within the prescribed time period, so a further order is needed to require the mine operator to immediately withdraw all persons (except certain authorized persons) from the affected area of a quarry or mine.
- Total number of citations and orders for unwarrantable failure of the mine operator to comply with mandatory health or safety standards under Section 104(d) of the Mine Act (hereinafter, "Section 104(d) Citations and Orders"). These violations are similar to those described above, but the standard is that the violation could significantly and substantially contribute to the cause and effect of a safety or health hazard, but the conditions do not cause imminent danger, and the MSHA inspector finds that the violation is caused by an unwarranted failure of the operator to comply with the health and safety standards.
- Total number of flagrant violations under section 110(b)(2) of the Mine Act (hereinafter, "Section 110(b)(2) Violations"). These violations are penalty violations issued if MSHA determines that violations are "flagrant", for which civil penalties may be assessed. A "flagrant" violation means a reckless or repeated failure to make reasonable efforts to eliminate a known violation of a mandatory health or safety standard that substantially and proximately caused, or reasonably could have been expected to cause, death or serious bodily injury.

- Total number of imminent danger orders issued under section 107(a) of the Mine Act (hereinafter, “Section 107(a) Orders”). These orders are issued for situations in which MSHA determines an imminent danger exists in the quarry or mine and results in orders of immediate withdrawal of all persons (except certain authorized persons) from the area of the quarry or mine affected by its condition until the imminent danger and the underlying conditions causing the imminent danger no longer exist.
- Total Dollar Value of MSHA Assessments Proposed. These are the amounts of proposed assessments issued by MSHA with each citation or order for the time period covered by the report. Penalties are assessed by MSHA according to a formula that considers a number of factors, including the mine operator’s history, size, negligence, gravity of the violation, good faith in trying to correct the violation promptly, and the effect of the penalty on the operator’s ability to continue in business.
- Total Number of Mining-Related Fatalities. Mines subject to the Mine Act are required to report all fatalities occurring at their facilities unless the fatality is determined to be “non-chargeable” to the mining industry. The final rules of the SEC require disclosure of mining-related fatalities at mines subject to the Mine Act. Only fatalities determined by MSHA not to be mining-related may be excluded.
- Receipt of written notice from MSHA of a pattern (or a potential to have such a pattern) of violations of mandatory health or safety standards that are of such nature as could have significantly and substantially contributed to the cause and effect of other mine health or safety hazards under section 104(e) of the Mine Act. If MHSA determines that a mine has a “pattern” of these types of violations, or the potential to have such a pattern, MSHA is required to notify the mine operator of the existence of such a thing.
- Legal Actions Pending as of the Last Day of Period.
- Legal Actions Initiated During Period.
- Legal Actions Resolved During Period.

The Federal Mine Safety and Health Review Commission (the “Commission”) is an independent adjudicative agency that provides administrative trial and appellate review of legal disputes arising under the Mine Act. The cases may involve, among other questions, challenges by operators to citations, orders and penalties they have received from MSHA, or complaints of discrimination by miners under Section 105 of the Mine Act. Appendix 1 shows, for each of the Company’s quarries and mines identified, as of December 31, 2019, the number of legal actions pending before the Commission, along with the number of legal actions initiated before the Commission during the year as well as resolved during the year. In addition, Appendix 1 includes a footnote to the column for legal actions before the Commission pending as of the last day of the period, which footnote breaks down that total number of legal actions pending by categories according to the type of proceeding in accordance with various categories established by the Procedural Rules of the Commission.

Appendix 1 attached.

Location	MSHA ID	Section 104 S&S Citations (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA Assessment/$ Proposed	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violation Under Section 104(e) (yes/no)	Received Notice of Potential to have Pattern under Section 104(e) (yes/no)	Legal Actions Pending as of Last Day of Period (#)*	Legal Actions Instituted During Period (#)	Legal Actions Resolved During Period (#)
Amelia Quarry	4407372	0	0	0	0	0	$ —	0	no	no	0	0	0
American Stone	3100189	0	0	0	0	0	$ 121	0	no	no	0	0	0
Anderson Creek Quarry	4402963	1	0	0	0	0	$ 371	0	no	no	0	0	0
Arrowood Quarry	3100059	1	0	0	0	0	$ 1,732	0	no	no	0	0	0
Asheboro Quarry	3100066	0	0	0	0	0	$ —	0	no	no	0	0	0
Bakers Quarry	3100071	0	0	0	0	0	$ 242	0	no	no	0	0	0
Belgrade Quarry	3100064	0	0	0	0	0	$ 121	0	no	no	0	0	0
Benson Quarry	3101979	0	0	0	0	0	$ —	0	no	no	0	0	0
Berkeley Quarry	3800072	0	0	0	0	0	$ 846	0	no	no	0	0	0
Bessemer City Quarry	3101105	0	0	0	0	0	$ —	0	no	no	0	0	0
Black Ankle Quarry	3102220	0	0	0	0	0	$ —	0	no	no	0	0	0
Bonds Quarry	3101963	0	0	0	0	0	$ 181	0	no	no	0	0	0
Boonesboro Quarry	1800024	0	0	0	0	0	$ —	0	no	no	0	0	0
Burlington Quarry	3100042	0	0	0	0	0	$ —	0	no	no	0	0	0
Caldwell Quarry	3101869	0	0	0	0	0	$ 121	0	no	no	0	0	0
Calhoun Sand	3800716	2	0	0	0	0	$ 5,965	0	no	no	1	1	0
Castle Hayne Quarry	3100063	0	0	0	0	0	$ 121	0	no	no	0	0	0
Cayce	3800016	0	0	0	0	0	$ 1,552	0	no	no	0	0	0
Central Rock Quarry	3100050	0	0	0	0	0	$ —	0	no	no	0	0	0
Charlotte Quarry	3100057	0	0	0	0	0	$ 317	0	no	no	0	0	0
Churchville Quarry	1800012	0	0	0	0	0	$ 242	0	no	no	0	0	0
Clarks Quarry	3102009	1	0	0	0	0	$ 757	0	no	no	0	0	0
Cumberland Quarry	3102237	0	0	0	0	0	$ —	0	no	no	0	0	0
Denver Quarry	3101971	0	0	0	0	0	$ 242	0	no	no	0	0	0
Doswell Quarry VA	4400045	0	0	0	0	0	$ 121	0	no	no	0	0	0
East Alamance Quarry	3102021	1	0	0	0	0	$ 344	0	no	no	0	0	0
Edmund Sand	3800662	0	0	0	0	0	$ 181	0	no	no	0	0	0
Fountain Quarry	3100065	1	0	0	0	0	$ —	0	no	no	0	0	0
Franklin Quarry	3102130	0	0	0	0	0	$ 121	0	no	no	0	0	0
Frederick Quarry	1800013	0	0	0	0	0	$ 302	0	no	no	0	0	0

Location	MSHA ID	Section 104 S&S Citations (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA Assessment/$ Proposed	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violation Under Section 104(e) (yes/no)	Received Notice of Potential to have Pattern under Section 104(e) (yes/no)	Legal Actions Pending as of Last Day of Period (#)*	Legal Actions Instituted During Period (#)	Legal Actions Resolved During Period (#)
Fuquay Quarry	3102055	0	0	0	0	0	$ —	0	no	no	0	0	0
Garner Quarry	3100072	0	0	0	0	0	$ **196**	0	no	no	0	0	0
Georgetown II Quarry	3800525	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Greensboro Portable Plt	3102336	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Greensboro Portable Plt II	3102335	0	0	0	0	0	$ —	0	no	no	0	0	0
Hickory Quarry	3100043	0	0	0	0	0	$ —	0	no	no	0	0	0
Hicone	3102088	0	0	0	0	0	$ —	0	no	no	0	0	0
Jamestown Quarry	3100051	0	0	0	0	0	$ —	0	no	no	0	0	0
Kannapolis Quarry	3100070	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Kent Sand & Gravel	1800745	1	0	0	0	0	$ **593**	0	no	no	0	0	0
Kings Mountain Quarry	3100047	0	0	0	0	0	$ —	0	no	no	0	0	0
Lemon Springs Quarry	3101104	1	0	0	0	0	$ **1,340**	0	no	no	0	0	0
Loamy Sand Gravel	3800721	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Maiden Quarry	3102125	0	0	0	0	0	$ —	0	no	no	0	0	0
Mallard Creek Quarry	3102006	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Matthews Quarry	3102084	0	0	0	0	0	$ —	0	no	no	0	0	0
Medford Quarry	1800035	0	0	0	0	0	$ **1,028**	0	no	no	0	0	0
Midlothian Quarry	4403767	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Misc Greensboro District	B8611	0	0	0	0	0	$ —	0	no	no	0	0	0
North Columbia	3800146	0	0	0	0	0	$ **1,193**	0	no	no	0	1	1
North East Quarry	1800417	0	0	0	0	0	$ **132**	0	no	no	0	0	0
Old Charleston Sand	3800702	0	0	0	0	0	$ **384**	0	no	no	0	0	0
Onslow Quarry	3102120	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Pinesburg Quarry	1800021	1	0	0	0	0	$ **647**	0	no	no	0	0	0
Pomona Quarry	3100052	0	0	0	0	0	$ —	0	no	no	0	0	0
Raleigh Durham Quarry	3101941	0	0	0	0	0	$ —	0	no	no	0	0	0
Red Hill Quarry	4400072	2	0	0	0	0	$ **2,000**	0	no	no	0	0	0
Reidsville Quarry	3100068	0	0	0	0	0	$ —	0	no	no	0	0	0
Rock Hill Quarry	3800026	1	0	0	0	0	$ **1,121**	0	no	no	0	0	0

Location	MSHA ID	Section 104 S&S Citations (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA Assessment/$ Proposed	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violation Under Section 104(e) (yes/no)	Received Notice of Potential to have Pattern under Section 104(e) (yes/no)	Legal Actions Pending as of Last Day of Period (#)*	Legal Actions Instituted During Period (#)	Legal Actions Resolved During Period (#)
Salem Stone	3102038	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Statesville Quarry	3100055	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Texas Quarry	1800009	1	0	0	0	0	$ **9,692**	0	no	no	0	4	4
Thomasville Quarry	3101475	0	0	0	0	0	$ —	0	no	no	0	0	0
Warfordsburg Quarry	3600168	0	0	0	0	0	$ **726**	0	no	no	0	0	0
Wilmington Sand	3101308	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Wilson Quarry	3102230	0	0	0	0	0	$ —	0	no	no	0	0	0
Woodleaf Quarry	3100069	0	0	0	0	0	$ **121**	0	no	no	0	0	0
(45) North Indianapolis SURFACE	1200002	3	0	0	0	0	$ **2,168**	0	no	no	0	0	0
Apple Grove S G	3301676	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Belmont Sand	1201911	0	0	0	0	0	$ —	0	no	no	0	0	0
Bowling Green North Quarry	1500065	0	0	0	0	0	$ —	0	no	no	0	0	0
Bowling Green South Quarry	1500025	0	0	0	0	0	$ —	0	no	no	0	0	0
Burning Springs Mine	4608862	0	0	0	0	0	$ **374**	0	no	no	0	1	1
Carmel Sand	1202124	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Cedarville Quarry	3304072	0	0	0	0	0	$ —	0	no	no	0	1	1
Cloverdale Quarry	1201744	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Cumberland Quarry	1500037	0	0	0	0	0	$ —	0	no	no	0	0	0
E Town Sand Gravel	3304279	0	0	0	0	0	$ **484**	0	no	no	0	0	0
Fairfield Quarry	3301396	0	0	0	0	0	$ —	0	no	no	0	0	0
Harlan Quarry	1500071	0	0	0	0	0	$ —	0	no	no	0	0	0
Hartford Quarry	1500095	0	0	0	0	0	$ —	0	no	no	0	0	0
Kentucky Ave Mine	1201762	5	0	0	0	0	$ **4,414**	0	no	no	0	0	0
Kokomo Mine	1202105	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Kokomo Sand	1202203	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Kokomo Stone	1200142	0	0	0	0	0	$ **363**	0	no	no	0	0	0
Noblesville Sand	1201994	2	0	0	0	0	$ **250**	0	no	no	0	0	0
Noblesville Stone	1202176	4	0	2	0	0	$ **2,930**	0	no	no	1	3	2

Location	MSHA ID	Section 104 S&S Citations (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA Assessment/$ Proposed	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violation Under Section 104(e) (yes/no)	Received Notice of Potential to have Pattern under Section 104(e) (yes/no)	Legal Actions Pending as of Last Day of Period (#)*	Legal Actions Instituted During Period (#)	Legal Actions Resolved During Period (#)
North Indianapolis Quarry	1201993	2	0	0	0	0	$ **1,512**	0	no	no	0	0	0
Petersburg, Ky Gravel	1516895	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Phillipsburg Quarry	3300006	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Shamrock SG	3304011	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Spring Valley Cook Rd SG	3304534	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Troy Gravel	3301678	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Waverly Sand	1202038	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Xenia Gravel	3301393	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Appling Quarry	901083	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Auburn Al Quarry	100006	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Auburn, GA Quarry	900436	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Augusta, GA Quarry	900065	0	0	0	0	0	$ **438**	0	no	no	0	0	0
Ball Ground Quarry	900955	1	0	0	0	0	$ **363**	0	no	no	0	0	0
Calhoun Quarry	4003395	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Chattanooga Quarry	4003159	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Cumming Quarry	900460	3	0	0	0	0	$ **242**	0	no	no	0	0	0
Douglasville Quarry	900024	1	0	0	0	0	$ **493**	0	no	no	0	0	0
Edgefield Quarry	3800738	0	0	0	0	0	$ **578**	0	no	no	0	0	0
Jefferson Quarry	901106	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Junction City Quarry	901029	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Lithonia Quarry	900023	0	0	0	0	0	$ **544**	0	no	no	0	0	0
Maylene Quarry	100634	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Morgan County	901126	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Newton Quarry	900899	0	0	0	0	0	$ **—**	0	no	no	0	0	0
O'Neal Plant Co 19	103076	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Paulding Quarry	901107	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Perry Quarry	801083	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Red Oak Quarry	900069	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Ruby Quarry	900074	0	0	0	0	0	$ **121**	0	no	no	0	0	0

Location	MSHA ID	Section 104 S&S Citations (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA Assessment/$ Proposed	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violation Under Section 104(e) (yes/no)	Received Notice of Potential to have Pattern under Section 104(e) (yes/no)	Legal Actions Pending as of Last Day of Period (#)*	Legal Actions Instituted During Period (#)	Legal Actions Resolved During Period (#)
Six Mile Quarry	901144	1	0	0	0	0	$ **586**	0	no	no	0	0	1
St. Marys Sand Company	901199	1	0	0	0	0	$ **1,164**	0	no	no	0	0	0
Tyrone Quarry	900306	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Vance Quarry Co 19	103022	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Warrenton Quarry	900580	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Alden Portable Plant #2	1302033	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Alden Portable Sand	1302037	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Alden Quarry	1300228	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Ames Mine	1300014	2	0	0	0	0	$ **2,554**	0	no	no	0	4	4
Cedar Rapids Quarry	1300122	2	0	0	0	0	$ **1,203**	0	no	no	0	0	0
Des Moines Portable	1300150	0	0	0	0	0	$ **1,331**	0	no	no	0	0	0
Des Moines Portable #2	1300932	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Dubois Quarry	2501046	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Durham Mine	1301225	1	0	0	0	0	$ **605**	0	no	no	0	0	0
Earlham Quarry	1302123	3	0	1	0	0	$ **4,258**	0	no	no	2	2	0
Ferguson Quarry	1300124	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Fort Calhoun Quarry	2500006	1	0	0	0	0	$ **605**	0	no	no	0	0	0
Fort Calhoun UG	2501300	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Fort Dodge Mine	1300032	0	0	0	0	0	$ **5,459**	0	no	no	0	0	0
Greenwood Quarry New	2300141	0	0	0	0	0	$ **513**	0	no	no	0	0	0
Iowa Grading 2	1302316	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Linn County Sand	1302208	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Malcom Mine	1300112	0	0	0	0	0	$ **605**	0	no	no	0	0	0
Marshalltown Sand	1300718	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Midwest Division OH	A2354	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Moore Quarry	1302188	1	0	0	0	0	$ **852**	0	no	no	0	0	0
New Harvey Sand	1301778	0	0	0	0	0	$ **—**	0	no	no	0	0	0
North Valley Sand	2501271	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Ottawa Quarry New	1401590	0	0	0	0	0	$ **242**	0	no	no	0	0	0

Location	MSHA ID	Section 104 S&S Citations (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA Assessment/$ Proposed	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violation Under Section 104(e) (yes/no)	Received Notice of Potential to have Pattern under Section 104(e) (yes/no)	Legal Actions Pending as of Last Day of Period (#)*	Legal Actions Instituted During Period (#)	Legal Actions Resolved During Period (#)
Pacific Quarry	4500844	0	0	0	0	0	$ **484**	0	no	no	0	0	0
Pedersen Quarry	1302192	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Plant 854	1302126	0	0	0	0	0	$ **363**	0	no	no	0	0	0
Portland Quarry	1302122	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Raccoon River Sand	1302315	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Randolph Deep Mine	2302308	0	0	0	0	0	$ **1,573**	0	no	no	1	1	0
Reasnor Sand	1300814	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Saylorville Sand	1302290	0	0	0	0	0	$ **275**	0	no	no	0	0	0
St Cloud Quarry	2100081	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Stamper Mine	2302232	2	0	0	0	0	$ **2,674**	0	no	no	0	0	0
Sully Mine	1300063	2	0	0	0	0	$ **1,591**	0	no	no	0	0	0
Sunflower Qy Co 61	1401556	0	0	0	0	0	$ **363**	0	no	no	0	0	0
Weeping Water Mine	2500998	4	0	0	0	0	$ **1,331**	0	no	no	0	0	1
West Center Sand	2501231	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Yellow Medicine Quarry	2100033	0	0	0	0	0	$ **1,148**	0	no	no	0	0	0
Beckmann Quarry	4101335	0	0	0	0	0	$ **8,162**	0	no	no	0	0	2
Bedrock Sand Gravel	4103283	0	0	0	0	0	$ **605**	0	no	no	0	0	2
Bells Savoy SG	4104019	1	0	0	0	0	$ **391**	0	no	no	0	0	0
Black Rock Quarry	300011	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Black Spur Quarry	4104159	0	0	0	0	0	$ **3,223**	0	no	no	0	0	0
Blake Quarry	1401584	0	0	0	0	0	$ **289**	0	no	no	0	0	1
Bridgeport Stone	4100007	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Broken Bow SG	3400460	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Chico Quarry	4103360	0	0	0	0	0	$ **577**	0	no	no	0	0	0
Davis Quarry	3401299	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Garfield SG	4103909	1	0	0	0	0	$ **1,117**	0	no	no	0	0	0
Garwood Gravel	4102886	0	0	0	0	0	$ **2,000**	0	no	no	0	0	0
GMS TXI	C335	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Hatton Quarry	301614	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Helotes	4103137	0	0	0	0	0	$ **121**	0	no	no	0	0	0

Location	MSHA ID	Section 104 S&S Citations (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA Assessment/$ Proposed	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violation Under Section 104(e) (yes/no)	Received Notice of Potential to have Pattern under Section 104(e) (yes/no)	Legal Actions Pending as of Last Day of Period (#)*	Legal Actions Instituted During Period (#)	Legal Actions Resolved During Period (#)
Highway 211 Quarry	4103829	0	0	0	0	0	$ **242**	0	no	no	0	0	1
Hondo #2	4104708	0	0	0	0	0	$ **363**	0	no	no	0	0	1
Hondo West	4104090	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Hugo Quarry	3400061	0	0	0	0	0	$ **154**	0	no	no	0	0	0
Hunter Stone	4105230	1	0	0	0	0	$ **414**	0	no	no	0	0	0
Idabel Quarry	3400507	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Jones Mill Quarry	301586	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Koontz McCombs Pit	4105048	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Medina Rock Rail	4105170	2	0	0	0	0	$ **8,092**	0	no	no	0	0	0
Mill Creek Limestone	3401859	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Mill Creek Quarry	3401285	0	0	0	0	0	$ **—**	0	no	no	0	0	1
Perryville Aggregates	1601417	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Poteet Sand	4101342	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Rio Medina	4103594	0	0	0	0	0	$ **363**	0	no	no	0	0	0
San Pedro Quarry	4101337	1	0	0	0	0	$ **903**	0	no	no	0	0	0
Sawyer Quarry	3401634	2	0	0	0	0	$ **586**	0	no	no	0	0	0
Smithson Valley Quarry	4104108	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Snyder Quarry	3401651	0	0	0	0	0	$ **559**	0	no	no	0	0	0
South Texas Port #2	4104204	0	0	0	0	0	$ **242**	0	no	no	0	0	0
Tin Top SG	4102852	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Washita Quarry	3402049	0	0	0	0	0	$ **168**	0	no	no	0	0	0
Webberville	4104363	1	0	0	0	0	$ **1,573**	0	no	no	0	0	0
Woodworth Aggregates	1601070	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Granite Canyon Quarry	4800018	4	0	0	0	0	$ **1,536**	0	no	no	0	0	0
Greeley 35th Ready Mix	503215	0	0	0	0	0	$ **121**	0	no	no	0	0	0
Greeley 35th Sand Gravel	504613	0	0	0	0	0	$ **—**	0	no	no	0	0	0
Guernsey Quarry	4800004	1	0	0	0	0	$ **1,696**	0	no	no	0	0	0
Milford Quarry Utah	4202177	0	0	0	0	0	$ **820**	0	no	no	0	0	0
Parkdale Quarry	504635	1	0	0	0	0	$ **423**	0	no	no	0	0	0
Parsons Sand Gravel	504382	0	0	0	0	0	$ **—**	0	no	no	0	0	0

Location	MSHA ID	Section 104 S&S Citations (#)	Section 104(b) Orders (#)	Section 104(d) Citations and Orders (#)	Section 110(b)(2) Violations (#)	Section 107(a) Orders (#)	Total Dollar Value of MSHA Assessment/$ Proposed	Total Number of Mining Related Fatalities (#)	Received Notice of Pattern of Violation Under Section 104(e) (yes/no)	Received Notice of Potential to have Pattern under Section 104(e) (yes/no)	Legal Actions Pending as of Last Day of Period (#)*	Legal Actions Instituted During Period (#)	Legal Actions Resolved During Period (#)
PC Portable Plant 4	4801565	0	0	0	0	0	$ —	0	no	no	0	0	0
Penrose Sand and Gravel	504509	1	0	0	0	0	$ **638**	0	no	no	0	0	0
Platte Sand & Gravel	504418	0	0	0	0	0	$ —	0	no	no	0	0	0
Portable Crushing	503984	0	0	0	0	0	$ **1,001**	0	no	no	0	0	0
Portable Plant 1	504359	1	1	0	0	0	$ **355**	0	no	no	0	0	0
Portable Plant 21	504520	0	0	0	0	0	$ —	0	no	no	0	0	0
Red Canyon Quarry	504136	0	0	0	0	0	$ **1,405**	0	no	no	0	0	0
Riverbend Sand Gravel	504841	0	0	0	0	0	$ —	0	no	no	0	0	0
Spanish Springs Quarry Co 2	2600803	1	0	0	0	0	$ **1,305**	0	no	no	0	3	3
Spec Agg Quarry	500860	0	0	0	0	0	$ —	0	no	no	0	0	0
Taft Sand Gravel	504526	0	0	0	0	0	$ —	0	no	no	0	0	0
Taft Shop	504735	0	0	0	0	0	$ —	0	no	no	0	0	0
Hunter Cement	4102820	7	0	0	0	0	$ **14,375**	0	no	no	0	0	2
Midlothian Cement	4100071	5	0	0	0	0	$ **13,524**	0	no	no	0	0	3
Geology and Exploration	B7127	0	0	0	0	0	$ —	0	no	no	0	0	0
Salisbury Shop	3101235	0	0	0	0	0	$ —	0	no	no	0	0	0
Woodville Stone	3300156	1	0	0	0	0	$ **7,654**	0	no	no	0	2	3
TOTAL		**86**	**1**	**3**	**0**	**0**	$ **159,844**	**0**			5	23	34

* Of the five legal actions pending on December 31, 2019, three were contests of citations or orders referenced in Subpart B of CFR Part 2700, which includes contests of citations and orders issued under Section 104 of the Mine Act and contests of imminent danger orders under Section 107 of the Mine Act and two were contests of proposed penalties referenced in Subpart C of 29 CFR Part 2700, which are administrative proceedings before the Commission challenging a civil penalty that MSHA has proposed for the violation contained in a citation or order.