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

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2020

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: 1-6003

FEDERAL SIGNAL

FEDERAL SIGNAL CORPORATION
(Exact name of registrant as specified in its charter)

Delaware	**36-1063330**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*

1415 West 22nd Street, Oak Brook, Illinois
(Address of principal executive offices)

60523
(Zip code)

(630) 954-2000
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $1.00 per share	FSS	New York Stock Exchange

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

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

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

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

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

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

As of September 30, 2020, the number of shares outstanding of the registrant's common stock was 60,523,414.

FEDERAL SIGNAL CORPORATION

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FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q ("Form 10-Q") is being filed by Federal Signal Corporation and its subsidiaries (referred to collectively as the "Company," "we," "our" or "us" herein, unless the context otherwise indicates) with the United States ("U.S.") Securities and Exchange Commission (the "SEC"), and includes comments made by management that may contain words such as "may," "will," "believe," "expect," "anticipate," "intend," "plan," "project," "estimate" and "objective" or similar terminology, or the negative thereof, concerning the Company's future financial performance, business strategy, plans, goals and objectives. These expressions are intended to identify forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the Private Securities Litigation Reform Act of 1995. Forward-looking statements include information concerning the Company's possible or assumed future performance or results of operations and are not guarantees. While these statements are based on assumptions and judgments that management has made in light of industry experience as well as perceptions of historical trends, current conditions, expected future developments and other factors believed to be appropriate under the circumstances, they are subject to risks, uncertainties and other factors that may cause the Company's actual results, performance or achievements to be materially different.

These risks and uncertainties, some of which are beyond the Company's control, include the risk factors described under Part I, Item 1A, *Risk Factors*, of the Company's Annual Report on Form 10-K for the year ended December 31, 2019, which was filed with the SEC on February 27, 2020, and as updated in Part II, Item 1A, *Risk Factors* of the Company's Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2020 and June 30, 2020, which were filed with the SEC on April 29, 2020 and July 29, 2020, respectively, and this Form 10-Q. These factors may not constitute all factors that could cause actual results to differ materially from those discussed in any forward-looking statement. The Company operates in a continually changing business environment and new factors emerge from time to time, including, for example, the ongoing coronavirus ("COVID-19") pandemic and the government response to the pandemic. The Company cannot predict such factors, nor can it assess the impact, if any, of such factors on its results of operations, financial condition or cash flow. Accordingly, forward-looking statements should not be relied upon as a predictor of actual results. The Company disclaims any responsibility to update any forward-looking statement provided in this Form 10-Q.

ADDITIONAL INFORMATION

The Company is subject to the reporting and information requirements of the Exchange Act and, as a result, is obligated to file Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and other reports and information with the SEC, as well as amendments to those reports. The Company makes these filings available free of charge through our website at www.federalsignal.com as soon as reasonably practicable after such materials are filed with, or furnished to, the SEC. Information on our website does not constitute part of this Form 10-Q.

PART I. FINANCIAL INFORMATION

Item 1. ***Financial Statements (Unaudited).***

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

(in millions, except per share data)	Three Months Ended September 30, 2020	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2020	Nine Months Ended September 30, 2019
Net sales	$ 279.8	$ 308.8	$ 836.0	$ 906.9
Cost of sales	207.2	226.8	618.3	665.6
Gross profit	72.6	82.0	217.7	241.3
Selling, engineering, general and administrative expenses	38.4	43.0	118.0	128.7
Acquisition and integration-related expenses	0.2	0.4	0.8	1.9
Restructuring	—	—	1.3	—
Operating income	34.0	38.6	97.6	110.7
Interest expense	1.2	2.1	4.5	6.1
Other (income) expense, net	(0.1)	0.2	2.1	0.5
Income before income taxes	32.9	36.3	91.0	104.1
Income tax expense	7.6	7.9	20.9	25.4
Net income	$ 25.3	$ 28.4	$ 70.1	$ 78.7
Earnings per share:				
Basic	$ 0.42	$ 0.47	$ 1.16	$ 1.31
Diluted	0.41	0.46	1.14	1.28
Weighted average common shares outstanding:				
Basic	60.3	60.2	60.3	60.1
Diluted	61.3	61.4	61.5	61.3

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in millions)	**2020**	**2019**	**2020**	**2019**
Net income	$ 25.3	$ 28.4	$ 70.1	$ 78.7
Other comprehensive income (loss):				
Change in foreign currency translation adjustment	4.4	(3.8)	(0.5)	(3.0)
Change in unrecognized net actuarial loss and prior service cost related to pension benefit plans, net of income tax expense of $0.2, $0.2, $0.6 and $0.5, respectively	0.3	1.3	3.0	2.8
Change in unrealized gain or loss on interest rate swaps, net of income tax expense (benefit) of $0.0, $(0.1), $(1.1) and $(0.5), respectively	0.1	(0.1)	(3.3)	(1.3)
Total other comprehensive income (loss)	4.8	(2.6)	(0.8)	(1.5)
Comprehensive income	$ 30.1	$ 25.8	$ 69.3	$ 77.2

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS

(in millions, except per share data)	September 30, 2020 (Unaudited)	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 66.2	$ 31.6
Accounts receivable, net of allowances for doubtful accounts of $3.0 and $2.4, respectively	145.0	134.2
Inventories	196.6	182.9
Prepaid expenses and other current assets	9.9	12.0
Total current assets	417.7	360.7
Properties and equipment, net of accumulated depreciation of $133.0 and $125.5, respectively	105.6	91.9
Rental equipment, net of accumulated depreciation of $40.9 and $33.6, respectively	115.4	115.4
Operating lease right-of-use assets	22.4	27.6
Goodwill	392.0	388.8
Intangible assets, net of accumulated amortization of $29.4 and $22.1, respectively	155.4	162.9
Deferred tax assets	7.7	10.0
Deferred charges and other long-term assets	8.2	7.9
Long-term assets of discontinued operations	0.3	0.3
Total assets	$ 1,224.7	$ 1,165.5
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term borrowings and finance lease obligations	$ 0.2	$ 0.2
Accounts payable	71.1	65.0
Customer deposits	11.5	11.5
Accrued liabilities:		
Compensation and withholding taxes	27.8	31.1
Current operating lease liabilities	8.1	8.2
Other current liabilities	39.7	44.0
Current liabilities of discontinued operations	0.2	0.2
Total current liabilities	158.6	160.2
Long-term borrowings and finance lease obligations	238.7	220.3
Long-term operating lease liabilities	16.2	21.6
Long-term pension and other postretirement benefit liabilities	44.6	50.9
Deferred tax liabilities	58.1	52.7
Other long-term liabilities	27.8	17.3
Long-term liabilities of discontinued operations	0.9	0.9
Total liabilities	544.9	523.9
Stockholders' equity:		
Common stock, $1 par value per share, 90.0 shares authorized, 67.8 and 66.9 shares issued, respectively	67.8	66.9
Capital in excess of par value	237.4	228.6
Retained earnings	583.8	528.2
Treasury stock, at cost, 7.3 and 6.4 shares, respectively	(119.3)	(93.0)
Accumulated other comprehensive loss	(89.9)	(89.1)
Total stockholders' equity	679.8	641.6
Total liabilities and stockholders' equity	$ 1,224.7	$ 1,165.5

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

(in millions)	**Nine Months Ended September 30, 2020**	**2019**
Operating activities:		
Net income	$ 70.1	$ 78.7
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	33.1	30.1
Stock-based compensation expense	5.4	5.9
Payments for acquisition-related activity	—	(3.1)
Deferred income taxes	8.4	8.6
Changes in operating assets and liabilities	(37.4)	(61.6)
Net cash provided by operating activities	79.6	58.6
Investing activities:		
Purchases of properties and equipment	(24.3)	(21.2)
Proceeds from sales of properties and equipment	0.5	0.3
Payments for acquisition-related activity	(6.2)	(49.6)
Proceeds from acquisition-related activity	0.8	—
Other, net	—	0.2
Net cash used for investing activities	(29.2)	(70.3)
Financing activities:		
Increase in revolving lines of credit, net	20.5	37.5
Payments of debt financing fees	—	(1.0)
Purchases of treasury stock	(13.7)	(1.0)
Redemptions of common stock to satisfy withholding taxes related to stock-based compensation	(9.0)	(1.9)
Payments for acquisition-related activity	—	(10.3)
Cash dividends paid to stockholders	(14.5)	(14.5)
Proceeds from stock-based compensation activity	0.6	1.7
Other, net	0.1	—
Net cash (used for) provided by financing activities	(16.0)	10.5
Effects of foreign exchange rate changes on cash and cash equivalents	0.2	(0.3)
Increase (decrease) in cash and cash equivalents	34.6	(1.5)
Cash and cash equivalents at beginning of year	31.6	37.4
Cash and cash equivalents at end of period	$ 66.2	$ 35.9

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Unaudited)

	Three Months Ended September 30, 2020					
(in millions)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total
Balance at July 1, 2020	$ 67.5	$ 234.7	$ 563.3	$ (115.4)	$ (94.7)	$ 655.4
Net income			25.3			25.3
Total other comprehensive income					4.8	4.8
Cash dividends declared ($0.08 per share)			(4.8)			(4.8)
Stock-based payments:						
Stock-based compensation		1.5				1.5
Stock option exercises and other	0.3	1.2		(3.7)		(2.2)
Stock repurchase program				(0.2)		(0.2)
Balance at September 30, 2020	$ 67.8	$ 237.4	$ 583.8	$ (119.3)	$ (89.9)	$ 679.8

	Three Months Ended September 30, 2019					
(in millions)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total
Balance at July 1, 2019	$ 66.7	$ 221.3	$ 479.7	$ (91.4)	$ (96.2)	$ 580.1
Net income			28.4			28.4
Total other comprehensive loss					(2.6)	(2.6)
Cash dividends declared ($0.08 per share)			(4.9)			(4.9)
Stock-based payments:						
Stock-based compensation		1.7				1.7
Stock option exercises and other	0.2	2.5		(1.2)		1.5
Balance at September 30, 2019	$ 66.9	$ 225.5	$ 503.2	$ (92.6)	$ (98.8)	$ 604.2

	Nine Months Ended September 30, 2020					
(in millions)	Common Stock	Capital in Excess of Par Value	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Loss	Total
Balance at January 1, 2020	$ 66.9	$ 228.6	$ 528.2	$ (93.0)	$ (89.1)	$ 641.6
Net income			70.1			70.1
Total other comprehensive loss					(0.8)	(0.8)
Cash dividends declared ($0.24 per share)			(14.5)			(14.5)
Stock-based payments:						
Stock-based compensation		5.4				5.4
Stock option exercises and other	0.7	3.6		(9.7)		(5.4)
Performance share unit transactions	0.2	(0.2)		(2.9)		(2.9)
Stock repurchase program				(13.7)		(13.7)
Balance at September 30, 2020	$ 67.8	$ 237.4	$ 583.8	$ (119.3)	$ (89.9)	$ 679.8

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (Unaudited)

	Nine Months Ended September 30, 2019					
(in millions)	**Common Stock**	**Capital in Excess of Par Value**	**Retained Earnings**	**Treasury Stock**	**Accumulated Other Comprehensive Loss**	**Total**
Balance at January 1, 2019	$ 66.4	$ 217.0	$ 432.5	$ (88.5)	$ (97.3)	$ 530.1
Net income			78.7			78.7
Total other comprehensive loss					(1.5)	(1.5)
Cash dividends declared ($0.24 per share)			(14.5)			(14.5)
Impact of adoption of ASU 2016-02			6.5			6.5
Stock-based payments:						
Stock-based compensation		5.2				5.2
Stock option exercises and other	0.4	3.4		(2.2)		1.6
Performance share unit transactions	0.1	(0.1)		(0.9)		(0.9)
Stock repurchase program				(1.0)		(1.0)
Balance at September 30, 2019	$ 66.9	$ 225.5	$ 503.2	$ (92.6)	$ (98.8)	$ 604.2

See notes to condensed consolidated financial statements.

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization and Description of the Business

Federal Signal Corporation was founded in 1901 and was reincorporated as a Delaware corporation in 1969. References herein to the "Company," "we," "our" or "us" refer collectively to Federal Signal Corporation and its subsidiaries.

Products manufactured and services rendered by the Company are divided into two reportable segments: Environmental Solutions Group and Safety and Security Systems Group. The individual operating businesses are organized as such because they share certain characteristics, including technology, marketing, distribution and product application, which create long-term synergies. These segments are discussed in Note 11 – Segment Information.

Basis of Presentation and Consolidation

The accompanying unaudited condensed consolidated financial statements represent the consolidation of Federal Signal Corporation and its subsidiaries included herein and have been prepared by the Company pursuant to the rules and regulations of the United States ("U.S.") Securities and Exchange Commission (the "SEC"). Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. generally accepted accounting principles ("GAAP") have been condensed or omitted pursuant to such rules and regulations, although the Company believes that the disclosures presented herein are adequate to ensure the information presented is not misleading. Except as otherwise noted, these condensed consolidated financial statements have been prepared in accordance with the Company's accounting policies described in the Company's Annual Report on Form 10-K for the year ended December 31, 2019, and should be read in conjunction with those consolidated financial statements and the notes thereto.

These condensed consolidated financial statements include all normal and recurring adjustments that we considered necessary to present a fair statement of our results of operations, financial condition and cash flow. Intercompany balances and transactions have been eliminated in consolidation. In addition, certain prior-year amounts have been reclassified to conform to current-year presentation.

The results reported in these condensed consolidated financial statements should not be regarded as necessarily indicative of results that may be expected for the entire year, which may differ materially due to, among other things, the risk factors described under Part I, Item 1A, *Risk Factors*, of the Company's Annual Report on Form 10-K for the year ended December 31, 2019, which was filed with the SEC on February 27, 2020, and as updated in Part II, Item 1A, *Risk Factors*, of the Company's Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2020 and June 30, 2020, which were filed with the SEC on April 29, 2020 and July 29, 2020, respectively, and in this Form 10-Q. While we label our quarterly information using a calendar convention whereby our first, second and third quarters are labeled as ending on March 31, June 30 and September 30, respectively, it is our longstanding practice to establish interim quarterly closing dates based on a 13-week period ending on a Saturday, with our fiscal year ending on December 31. The effects of this practice are not material and exist only within a reporting year.

Recent Accounting Pronouncements and Accounting Changes

In June 2016, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") No. 2016-13, *Financial Instruments – Credit Losses (Topic 326), Measurement of Credit Losses on Financial Statements*, which requires the measurement of expected credit losses for financial instruments based on historical experience, current conditions, and reasonable forecasts. The amendments in this ASU are effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years. The amendments in this ASU should be applied on a modified retrospective basis. The Company adopted this guidance effective January 1, 2020. The adoption of this ASU did not have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820)*, which eliminates certain disclosure requirements, such as the amount of, and reasons for, transfers between Level 1 and Level 2 of the fair value hierarchy. This ASU adds new disclosure requirements for Level 3 measurements, and is effective for fiscal years beginning after December 15, 2019 and interim periods within those fiscal years. The Company adopted this guidance effective January 1, 2020. The adoption of this ASU did not have a material impact on the Company's disclosures in its consolidated financial statements.

In December 2019, the FASB issued ASU No. 2019-12, *Income Taxes (Topic 740), Simplifying the Accounting for Income Taxes*, which is intended to simplify various aspects related to accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. The amendments in this ASU are effective for fiscal years beginning after December 15, 2020 and interim periods within those fiscal years, with early adoption permitted. The amendments should be applied on a retrospective, modified retrospective or prospective basis, depending on the area covered by the update. The Company currently expects to adopt this guidance effective January 1, 2021 and does not expect that its adoption will have a material impact on the Company's consolidated financial statements.

In March 2020, the FASB issued ASU No. 2020-04, *Reference Rate Reform (Topic 848), Facilitation of the Effects of Reference Rate Reform on Financial Reporting*, which provides temporary optional expedients and exceptions for applying U.S. GAAP to contracts, hedging relationships and other transactions that reference London Interbank Offered Rate ("LIBOR") or another reference rate expected to be discontinued because of reference rate reform. Among other things, for all types of hedging relationships, the guidance allows an entity to change the reference rate and other critical terms related to reference rate reform without having to remeasure the value or reassess a previous accounting determination. The amendments in this guidance should be applied on a prospective basis and, for companies with a fiscal year ending December 31, are effective from January 1, 2020 through December 31, 2022. The Company adopted this guidance effective January 1, 2020. When the transition occurs, the Company expects to apply this expedient to its existing interest rate swap that references LIBOR, and to any other new transactions that reference LIBOR or another reference rate that is discontinued, through December 31, 2022. The adoption of this ASU did not impact the Company's consolidated financial statements.

No other new accounting pronouncements issued, but not yet adopted, are expected to have a material impact on the Company's results of operations, financial position or cash flow.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect (i) the reported amounts of assets and liabilities, (ii) the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and (iii) the reported amounts of revenues and expenses during the reporting period. Actual results and outcomes may differ, including as a result of the risks and uncertainties associated with the COVID-19 pandemic and its effect on the global economy.

Significant Accounting Policies

There have been no changes to the Company's significant accounting policies as disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2019.

NOTE 2 – ACQUISITIONS

Acquisition of Public Works Equipment and Supply, Inc.

On June 12, 2020, the Company acquired certain assets and operations of Public Works Equipment and Supply, Inc. ("PWE"), a distributor of maintenance and infrastructure equipment covering North Carolina, South Carolina and parts of Tennessee. The acquisition included cash consideration of $6.2 million, which included a payment to acquire certain inventory and fixed assets at closing. As the acquisition closed on June 12, 2020, the assets and liabilities of PWE have been consolidated into the Company's Condensed Consolidated Balance Sheet as of September 30, 2020, and the post-acquisition results of operations have been included in the Condensed Consolidated Statements of Operations, within the Environmental Solutions Group.

The assets acquired and liabilities assumed in the PWE acquisition have been measured at their fair values at the acquisition date, resulting in $2.5 million of goodwill, which is deductible for tax purposes. Due to the timing of the acquisition, these amounts are preliminary and are subject to change within the measurement period as the Company finalizes its fair value estimates. The Company currently expects to finalize the purchase price allocation by the end of the current year.

The acquisition was not, and would not have been, material to the Company's net sales, results of operations or total assets during any period presented. Accordingly, the Company's consolidated results from operations do not differ materially from historical performance as a result of the acquisition, and therefore, pro-forma results are not presented.

NOTE 3 – REVENUE RECOGNITION

The following table presents the Company's Net sales disaggregated by geographic region, based on the location of the end customer, and by major product line:

(in millions)	Three Months Ended September 30, 2020	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2020	Nine Months Ended September 30, 2019
Geographic Region:				
U.S.	$ 219.1	$ 252.6	$ 650.7	$ 705.6
Canada	41.6	35.6	113.4	131.2
Europe/Other	19.1	20.6	71.9	70.1
Total net sales	$ 279.8	$ 308.8	$ 836.0	$ 906.9
Major Product Line:				
Environmental Solutions				
Vehicles and equipment (a)	$ 179.1	$ 198.3	$ 531.1	$ 585.7
Parts	32.4	34.4	96.7	101.0
Rental income (b)	9.2	12.1	27.3	35.1
Other (c)	10.3	9.2	23.1	18.9
Total	231.0	254.0	678.2	740.7
Safety and Security Systems				
Public safety and security equipment	29.5	31.6	97.6	98.6
Industrial signaling equipment	11.6	15.1	38.0	45.1
Warning systems	7.7	8.1	22.2	22.5
Total	48.8	54.8	157.8	166.2
Total net sales	$ 279.8	$ 308.8	$ 836.0	$ 906.9

(a) Includes net sales from the sale of new and used vehicles and equipment, including sales of rental equipment.
(b) Represents income from vehicle and equipment lease arrangements with customers.
(c) Primarily includes revenues from services, such as maintenance and repair work, and the sale of extended warranty contracts.

Contract Balances

The Company recognizes contract liabilities when cash payments, such as customer deposits, are received in advance of the Company's satisfaction of the related performance obligations. Contract liabilities are recognized as Net sales when the related performance obligations are satisfied, which generally occurs within three to six months of the cash receipt. Contract liability balances are not materially impacted by any other factors. The Company's contract liabilities were $14.7 million and $13.9 million as of September 30, 2020 and December 31, 2019, respectively. Contract assets, such as unbilled receivables, were not material as of any of the periods presented herein.

NOTE 4 – INVENTORIES

The following table summarizes the components of Inventories:

(in millions)	September 30, 2020	December 31, 2019
Finished goods	$ 99.8	$ 86.8
Raw materials	79.5	79.5
Work in process	17.3	16.6
Total inventories	$ 196.6	$ 182.9

NOTE 5 – DEBT

The following table summarizes the components of Long-term borrowings and finance lease obligations:

(in millions)	September 30, 2020	December 31, 2019
2019 Credit Agreement [(a)]	$ 238.2	$ 219.9
Finance lease obligations	0.7	0.6
Total long-term borrowings and finance lease obligations, including current portion	238.9	220.5
Less: Current finance lease obligations	0.2	0.2
Total long-term borrowings and finance lease obligations	$ 238.7	$ 220.3

(a) Defined as the Second Amended and Restated Credit Agreement, dated July 30, 2019.

As more fully described within Note 12 – Fair Value Measurements, the Company uses a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. The fair value of long-term debt is based on interest rates that we believe are currently available to us for issuance of debt with similar terms and remaining maturities (Level 2 input).

The following table summarizes the carrying amounts and estimated fair values of the Company's long-term borrowings:

	September 30, 2020		December 31, 2019	
(in millions)	Notional Amount	Fair Value	Notional Amount	Fair Value
Long-term borrowings [(a)]	$ 238.9	$ 238.9	$ 220.5	$ 220.5

(a) Long-term borrowings includes current finance lease obligations of $0.2 million and $0.2 million as of September 30, 2020 and December 31, 2019, respectively.

Borrowings under the 2019 Credit Agreement bear interest, at the Company's option, at a base rate or a LIBOR rate, plus, in each case, an applicable margin. The applicable margin ranges from zero to 0.75% for base rate borrowings and 1.00% to 1.75% for LIBOR borrowings. The Company must also pay a commitment fee to the lenders ranging between 0.10% to 0.25% per annum on the unused portion of the $500 million revolving credit facility along with other standard fees. Letter of credit fees are payable on outstanding letters of credit in an amount equal to the applicable LIBOR margin plus other customary fees.

The Company is subject to certain net leverage ratio and interest coverage ratio financial covenants under the 2019 Credit Agreement that are to be measured at each fiscal quarter-end. The Company was in compliance with all such covenants as of September 30, 2020.

As of September 30, 2020, there was $238.2 million of cash drawn and $11.2 million of undrawn letters of credit under the 2019 Credit Agreement, with $250.6 million of availability for borrowings. As of December 31, 2019, there was $219.9 million cash drawn and $11.2 million of undrawn letters of credit under the 2019 Credit Agreement, with $268.9 million of availability for borrowings.

The following table summarizes the gross borrowings and gross payments under the Company's revolving credit facilities:

	Nine Months Ended September 30,	
(in millions)	2020	2019
Gross borrowings	$ 82.6	$ 80.1
Gross payments	62.1	42.6

Interest Rate Swap

On June 2, 2017, the Company entered into an interest rate swap (the "2017 Swap") with a notional amount of $150.0 million, as a means of fixing the floating interest rate component on $150.0 million of its variable-rate debt. In the third quarter of 2019, the Company terminated the 2017 Swap and received $0.2 million in connection with its settlement. The 2017 Swap was previously designated as a cash flow hedge, with an original termination date of June 2, 2020.

On October 2, 2019, the Company entered into an interest rate swap (the "2019 Swap") with a notional amount of $75.0 million, as a means of fixing the floating interest rate component on $75.0 million of its variable-rate debt. The 2019 Swap is designated as a cash flow hedge, with a maturity date of July 30, 2024.

As a result of the application of hedge accounting treatment, all unrealized gains and losses related to the derivative instrument are recorded in Accumulated other comprehensive loss and are reclassified into operations in the same period in which the hedged transaction affects earnings. The gain on the termination of the 2017 Swap was included in Accumulated other comprehensive loss and was reclassified into earnings ratably through June 2, 2020. Hedge effectiveness is assessed quarterly. The Company does not use derivative instruments for trading or speculative purposes.

The fair value of the Company's interest rate swaps is derived from a discounted cash flow analysis based on the terms of the contract and the interest rate curve (Level 2 inputs) and measured on a recurring basis in our Condensed Consolidated Balance Sheets. At September 30, 2020, the fair value of the 2019 Swap was a liability of $3.4 million, which was included in Other long-term liabilities on the Condensed Consolidated Balance Sheet. At December 31, 2019, the fair value of the 2019 Swap was an asset of $0.9 million, which was included in Deferred charges and other long-term assets on the Condensed Consolidated Balance Sheet. During the three months ended September 30, 2020, an unrealized pre-tax gain of $0.1 million was recorded in Accumulated other comprehensive loss, whereas during the nine months ended September 30, 2020, an unrealized pre-tax loss of $4.3 million was recorded. No ineffectiveness was recorded in either period. During the three and nine months ended September 30, 2019, unrealized pre-tax losses of $0.2 million and $1.8 million, respectively, were recorded in Accumulated other comprehensive loss, and no ineffectiveness was recorded.

NOTE 6 – INCOME TAXES

The Company recognized income tax expense of $7.6 million and $7.9 million for the three months ended September 30, 2020 and 2019, respectively. The decrease in tax expense in the current-year quarter was largely due to lower pre-tax income levels, and the recognition of $0.7 million more excess tax benefits from stock compensation activity, compared to the prior-year quarter. The Company's effective tax rate for the three months ended September 30, 2020 was 23.1%, compared to 21.8% in the prior-year quarter, when the Company also recognized a $0.6 million benefit associated with the completion of a tax audit.

For the nine months ended September 30, 2020 and 2019, the Company recognized income tax expense of $20.9 million and $25.4 million, respectively. The decrease in tax expense in the current year was largely due to lower pre-tax income levels, and the recognition of $2.3 million more excess tax benefits from stock compensation activity, compared to the prior-year period. The Company's effective tax rate for the nine months ended September 30, 2020 was 23.0%, compared to 24.4% in the prior-year period.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") was enacted. The income tax provisions of the CARES Act had limited applicability to the Company and, therefore, did not have a material impact on the Company's income tax expense for the three and nine months ended September 30, 2020. However, as permitted under the CARES Act, the Company elected to defer approximately $3.3 million of federal income tax payments, that would have otherwise been paid during the second quarter of 2020, to the third quarter of 2020.

NOTE 7 – PENSION AND OTHER POST-EMPLOYMENT PLANS

Defined Benefit Pension Plans

The following table summarizes the components of Net periodic pension (benefit) expense:

	U.S. Benefit Plan				Non-U.S. Benefit Plan			
	Three Months Ended September 30,		Nine Months Ended September 30,		Three Months Ended September 30,		Nine Months Ended September 30,	
(in millions)	2020	2019	2020	2019	2020	2019	2020	2019
Service cost	$ —	$ —	$ —	$ —	$ —	$ —	$ 0.1	$ 0.1
Interest cost	$ 1.5	1.7	4.3	5.1	0.2	0.3	0.7	1.0
Amortization of actuarial loss	0.8	0.8	2.4	2.0	0.2	0.2	0.4	0.5
Amortization of prior service cost	—	—	—	—	—	—	0.1	0.1
Expected return on plan assets	(2.3)	(2.1)	(6.9)	(6.5)	(0.5)	(0.5)	(1.4)	(1.5)
Net periodic pension (benefit) expense	$ —	$ 0.4	(0.2)	0.6	$ (0.1)	$ —	(0.1)	0.2

The items that comprise Net periodic pension (benefit) expense, other than service cost, are included as a component of Other (income) expense, net on the Condensed Consolidated Statements of Operations.

In the nine months ended September 30, 2020, the Company contributed $5.0 million to its U.S. defined benefit plan. The Company did not make any contributions to its U.S. defined benefit plan in 2019. In each of the nine months ended September 30, 2020 and 2019, the Company contributed $1.0 million to its non-U.S. defined benefit plan.

During the remainder of 2020, the Company expects to make additional contributions of up to $0.3 million to the non-U.S. benefit plan.

Multi-Employer Pension Plans

During the second quarter of 2020, the Company decided to withdraw from the Sheet Metal Workers' National Pension Fund. In connection with the issuance of the Company's intention to withdraw from the plan, the Company recorded an estimated liability of $2.4 million as a component of Other current liabilities on the Condensed Consolidated Balance Sheet as of September 30, 2020. The related expense was included as a component of Other (income) expense, net on the Condensed Consolidated Statements of Operations for the nine months ended September 30, 2020.

NOTE 8 – COMMITMENTS AND CONTINGENCIES

Financial Commitments

The Company provides indemnifications and other guarantees in the ordinary course of business, the terms of which range in duration and often are not explicitly defined. Specifically, the Company is occasionally required to provide letters of credit and bid and performance bonds to various customers, principally to act as security for retention levels related to casualty insurance policies and to guarantee the performance of subsidiaries that engage in export and domestic transactions. At September 30, 2020, the Company had outstanding performance and financial standby letters of credit, as well as outstanding bid and performance bonds, aggregating to $28.1 million. If any such letters of credit or bonds are called, the Company would be obligated to reimburse the issuer of the letter of credit or bond. The Company believes the likelihood of any currently outstanding letter of credit or bond being called is remote.

The Company has transactions involving the sale of equipment to certain of its customers which include (i) guarantees to repurchase the equipment for a fixed price at a future date and (ii) guarantees to repurchase the equipment from the third-party lender in the event of default by the customer. As of September 30, 2020, the single year and maximum potential cash payments the Company could be required to make to repurchase equipment under these agreements were each $3.9 million. The Company's risk under these repurchase arrangements would be partially mitigated by the value of the products repurchased as part of the transaction. Historical cash requirements and losses associated with these obligations have not been significant, but could increase if customer defaults exceed current expectations, including as a result of the current COVID-19 pandemic and its effect on the global economy.

Product Warranties

The Company issues product performance warranties to customers with the sale of its products. The specific terms and conditions of these warranties vary depending upon the product sold and country in which the Company does business, with warranty periods generally ranging from one to five years. The Company estimates the costs that may be incurred under its basic limited warranty and records a liability in the amount of such costs at the time the sale of the related product is recognized. Factors that affect the Company's warranty liability include (i) the number of units under warranty, (ii) historical and anticipated rates of warranty claims and (iii) costs per claim. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary.

The following table summarizes the changes in the Company's warranty liabilities during the nine months ended September 30, 2020 and 2019:

(in millions)	2020	2019
Balance at January 1	$ 11.2	$ 9.8
Provisions to expense	5.2	4.9
Acquisitions	—	0.2
Payments	(6.3)	(4.8)
Balance at September 30	$ 10.1	$ 10.1

As of September 30, 2020 and December 31, 2019, an estimated liability was recorded within the Environmental Solutions Group in connection with a specific warranty matter. It is reasonably possible that the Company's estimate may change in the future as more information becomes available; however, the ultimate resolution of this matter is not expected to have a material adverse effect on the Company's results of operations, financial position or liquidity.

Liabilities of Discontinued Operations

The Company retains certain liabilities for operations discontinued in prior periods, primarily for environmental remediation and product liability. Included in liabilities of discontinued operations on the Condensed Consolidated Balance Sheets as of both September 30, 2020 and December 31, 2019, were reserves of $0.3 million related to environmental remediation at the Pearland, Texas facility previously used by the Company's discontinued Pauluhn business, and $0.8 million related to estimated product liability obligations of the discontinued North American refuse truck body business.

Legal Proceedings

The Company is subject to various claims, including pending and possible legal actions for product liability and other damages, and other matters arising in the ordinary course of the Company's business. On a quarterly basis, the Company reviews uninsured material legal claims against the Company and accrues for the costs of such claims as appropriate in the exercise of management's best judgment and experience. However, due to a lack of factual information available to the Company about a claim, or the procedural stage of a claim, it may not be possible for the Company to reasonably assess either the probability of a favorable or unfavorable outcome of the claim or to reasonably estimate the amount of loss should there be an unfavorable outcome. Therefore, for many claims, the Company cannot reasonably estimate a range of loss.

The Company believes, based on current knowledge and after consultation with counsel, that the outcome of such claims and actions will not have a material adverse effect on the Company's results of operations or financial condition. However, in the event of unexpected future developments, it is possible that the ultimate resolution of such matters, if unfavorable, could have a material adverse effect on the Company's results of operations, financial condition or cash flow.

Hearing Loss Litigation

The Company has been sued for monetary damages by firefighters who claim that exposure to the Company's sirens has impaired their hearing and that the sirens are therefore defective. There were 33 cases filed during the period of 1999 through 2004, involving a total of 2,443 plaintiffs, in the Circuit Court of Cook County, Illinois. These cases involved more than 1,800 firefighter plaintiffs from locations outside of Chicago. In 2009, six additional cases were filed in Cook County, involving 299 Pennsylvania firefighter plaintiffs. During 2013, another case was filed in Cook County involving 74 Pennsylvania firefighter plaintiffs.

The trial of the first 27 of these plaintiffs' claims occurred in 2008, whereby a Cook County jury returned a unanimous verdict in favor of the Company.

An additional 40 Chicago firefighter plaintiffs were selected for trial in 2009. Plaintiffs' counsel later moved to reduce the number of plaintiffs from 40 to nine. The trial for these nine plaintiffs concluded with a verdict against the Company and for the plaintiffs in varying amounts totaling $0.4 million. The Company appealed this verdict. On September 13, 2012, the Illinois Appellate Court rejected this appeal. The Company thereafter filed a petition for rehearing with the Illinois Appellate Court, which was denied on February 7, 2013. The Company sought further review by filing a petition for leave to appeal with the Illinois Supreme Court on March 14, 2013. On May 29, 2013, the Illinois Supreme Court issued a summary order declining to accept review of this case. On July 1, 2013, the Company satisfied the judgments entered for these plaintiffs, which resulted in final dismissal of these cases.

A third consolidated trial involving eight Chicago firefighter plaintiffs occurred during November 2011. The jury returned a unanimous verdict in favor of the Company at the conclusion of this trial.

Following this trial, on March 12, 2012 the trial court entered an order certifying a class of the remaining Chicago Fire Department firefighter plaintiffs for trial on the sole issue of whether the Company's sirens were defective and unreasonably dangerous. The Company petitioned the Illinois Appellate Court for interlocutory appeal of this ruling. On May 17, 2012, the Illinois Appellate Court accepted the Company's petition. On June 8, 2012, plaintiffs moved to dismiss the appeal, agreeing with the Company that the trial court had erred in certifying a class action trial in this matter. Pursuant to plaintiffs' motion, the Illinois Appellate Court reversed the trial court's certification order.

Thereafter, the trial court scheduled a fourth consolidated trial involving three firefighter plaintiffs, which began in December 2012. Prior to the start of this trial, the claims of two of the three firefighter plaintiffs were dismissed. On December 17, 2012, the jury entered a complete defense verdict for the Company.

Following this defense verdict, plaintiffs again moved to certify a class of Chicago Fire Department plaintiffs for trial on the sole issue of whether the Company's sirens were defective and unreasonably dangerous. Over the Company's objection, the trial court granted plaintiffs' motion for class certification on March 11, 2013 and scheduled a class action trial to begin on June 10, 2013. The Company filed a petition for review with the Illinois Appellate Court on March 29, 2013 seeking reversal of the class certification order.

On June 25, 2014, a unanimous three-judge panel of the First District Illinois Appellate Court issued its opinion reversing the class certification order of the trial court. Specifically, the Appellate Court determined that the trial court's ruling failed to satisfy the class-action requirements that the common issues of the firefighters' claims predominate over the individual issues and that there is an adequate representative for the class. During a status hearing on October 8, 2014, plaintiffs represented to the Court that they would again seek to certify a class of firefighters on the issue of whether the Company's sirens were defective and unreasonably dangerous. On January 12, 2015, plaintiffs filed motions to amend their complaints to add class action allegations with respect to Chicago firefighter plaintiffs, as well as the approximately 1,800 firefighter plaintiffs from locations outside of Chicago. On March 11, 2015, the trial court granted plaintiffs' motions to amend their complaints. On April 24, 2015, the cases were transferred to Cook County chancery court, which will decide all class certification issues. On March 23, 2018, plaintiffs filed a motion to certify as a class all firefighters from the Chicago Fire Department who have filed lawsuits in this matter. The parties have requested discovery from each other related to this motion. The Company intends to continue its objections to any attempt at certification. A settlement conference related to the Cook County cases occurred on October 20, 2020, which was not successful in resolving these cases. Another status hearing has been scheduled for November 19, 2020.

The Company has also filed motions to dismiss cases involving firefighters who worked for fire departments located outside of the State of Illinois based on improper venue. On February 24, 2017, the Circuit Court of Cook County entered orders dismissing the cases of 1,770 such firefighter plaintiffs from the jurisdiction of the State of Illinois. Pursuant to these orders, these plaintiffs had six months thereafter to refile their cases in jurisdictions where these firefighters are located. Prior to this six-month deadline, attorneys representing some of these plaintiffs contacted the Company regarding possible settlement of their cases. During the year ended December 31, 2017, the Company entered into a global settlement agreement with two attorneys who represented approximately 1,090 of these plaintiffs. Under the terms of the settlement agreement, the Company offered $700 per plaintiff to settle these cases and 717 plaintiffs accepted this offer as a final settlement. The attorneys representing these plaintiffs agreed to withdraw from representing plaintiffs who did not respond to the settlement offer. It is the Company's position that the non-settling plaintiffs who failed to timely refile their cases following the February 2017 dismissal by the Circuit Court of Cook County are now barred from doing so by the statute of limitations. The Company filed a venue motion seeking to transfer to DuPage County cases involving 10 plaintiffs who reside and work in Illinois but outside of Cook County. The Court granted this motion on June 28, 2017.

The Company has also been sued on this issue outside of the Cook County, Illinois venue. Between 2007 and 2009, a total of 71 lawsuits involving 71 plaintiffs were filed in the Court of Common Pleas, Philadelphia County, Pennsylvania. Three of these cases were dismissed pursuant to pretrial motions filed by the Company. Another case was voluntarily dismissed. Prior to trial in four cases, the Company paid nominal sums to obtain dismissals.

Three trials occurred in Philadelphia involving these cases filed in 2007 through 2009. The first trial involving one of these plaintiffs occurred in 2010, when the jury returned a verdict for the plaintiff. In particular, the jury found that the Company's siren was not defectively designed, but that the Company negligently constructed the siren. The jury awarded damages in the amount of $0.1 million, which was subsequently reduced to $0.08 million. The Company appealed this verdict. Another trial, involving nine Philadelphia firefighter plaintiffs, also occurred in 2010 when the jury returned a defense verdict for the Company as to all claims and all plaintiffs involved in that trial. The third trial, also involving nine Philadelphia firefighter plaintiffs, was completed during 2010 when the jury returned a defense verdict for the Company as to all claims and all plaintiffs involved in that trial.

Following defense verdicts in the last two Philadelphia trials, the Company negotiated settlements with respect to all remaining filed cases in Philadelphia at that time, as well as other firefighter claimants represented by the attorney who filed the Philadelphia cases. On January 4, 2011, the Company entered into a Global Settlement Agreement (the "Settlement Agreement") with the law firm of the attorney representing the Philadelphia claimants, on behalf of 1,125 claimants the firm represented (the “Claimants”) and who had asserted product claims against the Company (the “Claims”). Three hundred eight of the Claimants had lawsuits pending against the Company in Cook County, Illinois.

The Settlement Agreement provided that the Company pay a total amount of $3.8 million (the “Settlement Payment”) to settle the Claims (including the costs, fees and other expenses of the law firm in connection with its representation of the Claimants), subject to certain terms, conditions and procedures set forth in the Settlement Agreement. In order for the Company to be required to make the Settlement Payment: (i) each Claimant who agreed to settle his or her claims had to sign a release acceptable to the Company (a “Release”), (ii) each Claimant who agreed to the settlement and who was a plaintiff in a lawsuit, had to dismiss his or her lawsuit with prejudice, (iii) by April 29, 2011, at least 93% of the Claimants identified in the Settlement Agreement must have agreed to settle their claims and provide a signed Release to the Company and (iv) the law firm had to withdraw from representing any Claimants who did not agree to the settlement, including those who filed lawsuits. If the conditions to the settlement were met, but less than 100% of the Claimants agreed to settle their Claims and sign a Release, the Settlement Payment would be reduced by the percentage of Claimants who did not agree to the settlement.

On April 22, 2011, the Company confirmed that the terms and conditions of the Settlement Agreement had been met and made a payment of $3.6 million to conclude the settlement. The amount was based upon the Company’s receipt of 1,069 signed releases provided by Claimants, which was 95% of all Claimants identified in the Settlement Agreement.

The Company generally denies the allegations made in the claims and lawsuits by the Claimants and denies that its products caused any injuries to the Claimants. Nonetheless, the Company entered into the Settlement Agreement for the purpose of minimizing its expenses, including legal fees, and avoiding the inconvenience, uncertainty and distraction of the claims and lawsuits.

During April through October 2012, 20 new cases were filed in the Court of Common Pleas, Philadelphia County, Pennsylvania. These cases were filed on behalf of 20 Philadelphia firefighters and involve various defendants in addition to the Company. Five of these cases were subsequently dismissed. The first trial involving these 2012 Philadelphia cases occurred during December 2014 and involved three firefighter plaintiffs. The jury returned a verdict in favor of the Company. Following this trial, all of the parties agreed to settle cases involving seven firefighter plaintiffs set for trial during January 2015 for nominal amounts per plaintiff.

In January 2015, plaintiffs’ attorneys filed two new complaints in the Court of Common Pleas, Philadelphia, Pennsylvania on behalf of approximately 70 additional firefighter plaintiffs. The vast majority of the firefighters identified in these complaints are located outside of Pennsylvania. One of the complaints in these cases, which involves 11 firefighter plaintiffs from the District of Columbia, was removed to federal court in the Eastern District of Pennsylvania. Plaintiffs voluntarily dismissed all claims in this case on May 31, 2016. The Company thereafter moved to recover various fees and costs in this case, asserting that plaintiffs’ counsel failed to properly investigate these claims prior to filing suit. The Court granted this motion on April 25, 2017, awarding $0.1 million to the Company. After plaintiffs appealed this Order, the United States Court of Appeals for the Third Circuit affirmed the lower court decision awarding fees and costs to the Company.

With respect to claims of other out-of-state firefighters involved in these two cases, the Company moved to dismiss these claims as improperly filed in Pennsylvania. The Court granted this motion and dismissed these claims on November 5, 2015. During August through December 2015, another nine new cases were filed in the Court of Common Pleas, Philadelphia County, Pennsylvania. These cases involve a total of 193 firefighters, most of whom are located outside of Pennsylvania. The Company again moved to dismiss all claims filed by out-of-state firefighters in these cases as improperly filed in Pennsylvania. On May 24, 2016, the Court granted this motion and dismissed these claims. Plaintiffs appealed this decision and, on September 25, 2018, the appellate court reversed this dismissal. The Company then filed a petition with the appellate court requesting that the court reconsider its ruling. On December 7, 2018, the appellate court granted the Company’s petition and withdrew its prior decision. The Court ordered that the parties file additional briefs and a new panel of appellate judges issue a decision. On June 25, 2020, after further briefing, the appellate court issued a decision affirming the trial court’s dismissal of these cases.

On May 13, 2016, four new cases were filed in Philadelphia state court, involving a total of 55 Philadelphia firefighters who live in Pennsylvania. During August 2016, the Company settled a case involving four Philadelphia firefighters that had been set for trial in Philadelphia state court during September 2016. During 2017, plaintiffs filed additional cases in the Court of Common Pleas, Philadelphia County, involving over 100 Philadelphia firefighter plaintiffs. During January 2017, plaintiffs filed a motion to consolidate and bifurcate, similar to a motion filed in the Pittsburgh hearing loss cases, as described below. The Company has filed an opposition to this motion. These cases were then transferred to the mass tort program in Philadelphia for pretrial purposes. Plaintiffs' counsel thereafter dismissed several plaintiffs. During November 2017, a trial involving one Philadelphia firefighter occurred. The jury returned a verdict in favor of the Company in this trial. Prior to a dismissal of these cases pursuant to the Tolling Agreement, discussed below, there was a total of 75 firefighters involved in cases pending in the Philadelphia mass tort program.

During April through July 2013, additional cases were filed in Allegheny County, Pennsylvania on behalf of 247 plaintiff firefighters from Pittsburgh and against various defendants, including the Company. During May 2016, two additional cases were filed against the Company in Allegheny County involving 19 Pittsburgh firefighters. After the Company filed pretrial motions, the Court dismissed claims of 55 Pittsburgh firefighter plaintiffs. The Court scheduled trials for May, September and November 2016, for eight firefighters per trial. Prior to the first scheduled trial in Pittsburgh, the Court granted the Company's motion for summary judgment and dismissed all claims asserted by plaintiff firefighters involved in this trial. Following an appeal by the plaintiff firefighters, the appellate court affirmed this dismissal. The next trial for six Pittsburgh firefighters started on November 7, 2016. Shortly after this trial began, plaintiffs' counsel moved for a mistrial because a key witness suddenly became unavailable. The Court granted this motion and rescheduled this trial for March 6, 2017. During January 2017, plaintiffs also moved to consolidate and bifurcate trials involving Pittsburgh firefighters. In particular, plaintiffs sought one trial involving liability issues which will apply to all Pittsburgh firefighters who filed suit against the Company. The Company filed an opposition to this motion. On April 18, 2017, the trial court granted plaintiffs' motion to bifurcate the next Pittsburgh trial. Pursuant to a motion for clarification filed by the Company, the Court ruled that the bifurcation order would only apply to six plaintiffs who were part of the next trial group in Pittsburgh. The Company thereafter sought an interlocutory appeal of the Court's bifurcation order. The appellate court declined to accept the appeal at that time. A bifurcated trial began on September 27, 2017 in Allegheny County, Pennsylvania. Prior to and during trial, two plaintiffs were dismissed, resulting in four plaintiffs remaining for trial. After approximately two weeks of trial, the jury found that the Company's siren product was not defective or unreasonably dangerous and rendered a verdict in favor of the Company.

A second trial involving Pittsburgh firefighters began during January 2018. At the outset of this trial, plaintiffs' attorneys requested that the Company consider settlement of various cases. This trial was continued to allow the parties to further discuss possible settlement. During March 2018, the parties agreed in principle on a framework (the "Settlement Framework") to resolve hearing loss claims and cases in all jurisdictions involved in the hearing loss litigation except in Cook County and Lackawanna County, and excluding one case involving one firefighter in New York City. The firefighters excluded from the Settlement Framework are represented by different attorneys. The Company has agreed in principle to settle the cases in Lackawanna County and the case involving one firefighter in New York City for nominal amounts. Pursuant to the Settlement Framework, the Company would pay $700 to each firefighter who has filed a lawsuit and is eligible to be part of the settlement. The Company would pay $300 to each firefighter who has not yet filed a case and is eligible to be part of the settlement. To be eligible for settlement, among other things, firefighters must provide proof that they have high frequency noise-induced hearing loss. There are approximately 3,700 firefighters whose claims may be considered as part of this settlement, including approximately 1,320 firefighters who have ongoing filed lawsuits. This Settlement Framework was finalized in a global settlement agreement executed on November 4, 2019 (the "Framework Agreement"). Pursuant to the Framework Agreement, the parties are now in the process of determining how many of the approximately 3,700 firefighters will be eligible to participate in the settlement. In order to minimize the parties' respective legal costs and expenses during this settlement process, on July 5, 2018, the parties entered into a tolling agreement (the "Tolling Agreement"). Pursuant to the Tolling Agreement, counsel for the settling firefighters agreed to dismiss the pending lawsuits in all jurisdictions except for the Allegheny County (Pittsburgh), Pennsylvania cases, and the Company agreed to a tolling of any statute of limitations applicable to the dismissed cases. The Tolling Agreement continued in place until the parties executed the Framework Agreement on November 4, 2019. After execution of the Framework Agreement, the Allegheny County (Pittsburgh) cases were dismissed. The Framework Agreement requires plaintiffs' attorneys to withdraw from representing firefighters who elect not to participate in this settlement. As of September 30, 2020, the Company has recognized an estimated liability for the potential settlement amount under the Framework Agreement. While it is reasonably possible that the ultimate resolution of this matter may result in a loss in excess of the amount accrued, the incremental loss is not expected to be material.

During March 2014, an action also was brought in the Court of Common Pleas of Erie County, Pennsylvania on behalf of 61 firefighters. This case likewise involves various defendants in addition to the Company. After the Company filed pretrial motions, 33 Erie County firefighter plaintiffs voluntarily dismissed their claims. During August 2017, five cases involving 70 firefighter plaintiffs were filed in Lackawanna County, Pennsylvania. These cases involve firefighter plaintiffs who originally filed in Cook County and were dismissed pursuant to the Company's forum nonconveniens motion. As of September 30, 2020, a total of 263 firefighters are involved in cases filed in Allegheny and Lackawanna counties in Pennsylvania.

On September 17, 2014, 20 lawsuits, involving a total of 193 Buffalo Fire Department firefighters, were filed in the Supreme Court of the State of New York, Erie County. All of the cases filed in Erie County, New York have been removed to federal court in the Western District of New York. Plaintiffs have filed a motion to consolidate and bifurcate these cases, similar to the motion filed in the Pittsburgh hearing loss cases, as described above. The Company has filed an opposition to the motion. During February 2015, a lawsuit involving one New York City firefighter plaintiff was filed in the Supreme Court of the State of New York, New York County. The plaintiff named the Company as well as several other parties as defendants. That case subsequently was transferred to federal court in the Northern District of New York and thereafter dismissed. During April 2015 through January 2016, 29 new cases involving a total of 235 firefighters were filed in various counties in the New York City area. During December 2016 through October 2017, additional cases were filed in these jurisdictions. On February 5, 2018, the Company was served with a complaint in an additional case filed in Kings County, New York. This case involves one plaintiff. Prior to a dismissal of these cases pursuant to the Tolling Agreement, there was a total of 536 firefighters involved in cases filed in the State of New York.

During November 2015, the Company was served with a complaint filed in Union County, New Jersey state court, involving 34 New Jersey firefighters. This case has been transferred to federal court in the District of New Jersey. During the period from January through May 2016, eight additional cases were filed in various New Jersey state courts. Most of the firefighters in these cases reside in New Jersey and work or worked at New Jersey fire departments. During December 2016, a case involving one New Jersey firefighter was filed in the United States District Court of New Jersey. On May 2, 2017, plaintiffs filed a motion to consolidate and bifurcate in the pending federal court case in New Jersey. This motion was similar to bifurcation motions filed by plaintiffs in Pittsburgh, Buffalo and Philadelphia. The Court has denied this motion as premature. Pursuant to a petition filed by both parties, all New Jersey state court cases were consolidated for pretrial purposes. Prior to a dismissal of these cases pursuant to the Tolling Agreement, there was a total of 61 firefighters involved in cases filed in New Jersey.

During May through October 2016, nine cases were filed in Suffolk County, Massachusetts state court, naming the Company as a defendant. These cases involve 194 firefighters who lived and worked in the Boston area. During August 2017, plaintiffs filed additional cases in Suffolk County court. The Company moved to transfer various cases filed in Suffolk County to other counties in Massachusetts where plaintiffs reside and work. Prior to a dismissal of these cases pursuant to the Tolling Agreement, there was a total of 218 firefighters involved in cases filed in Massachusetts.

During August and September 2017, plaintiffs' attorneys filed additional hearing loss cases in Florida. The Company is the only named defendant. These cases were filed in several different counties in Florida, including Tampa, Miami and Orlando municipalities. Plaintiffs have agreed to stipulate that they will not seek more than $75,000 in damages in any individual plaintiff case. Prior to a dismissal of these cases pursuant to the Tolling Agreement, there was a total of 166 firefighters involved in cases filed in Florida.

From 2007 through 2009, firefighters also brought hearing loss claims against the Company in New Jersey, Missouri, Maryland and Kings County, New York. All of those cases, however, were dismissed prior to trial, including four cases in the Supreme Court of Kings County, New York that were dismissed upon the Company's motion in 2008. On appeal, the New York appellate court affirmed the trial court's dismissal of these cases. Plaintiffs' attorneys have threatened to file additional lawsuits. The Company intends to vigorously defend all of these lawsuits, if filed.

NOTE 9 – EARNINGS PER SHARE

The Company computes earnings per share ("EPS") in accordance with Accounting Standards Codification ("ASC") 260, *Earnings per Share*, which requires that non-vested restricted stock containing non-forfeitable dividend rights should be treated as participating securities pursuant to the two-class method. Under the two-class method, net income is reduced by the amount of dividends declared in the period for common stock and participating securities. The remaining undistributed earnings are then allocated to common stock and participating securities as if all of the net income for the period had been distributed. The amounts of distributed and undistributed earnings allocated to participating securities for the three and nine months ended September 30, 2020 and 2019 were insignificant and did not materially impact the calculation of basic or diluted EPS.

Basic EPS is computed by dividing income available to common stockholders by the weighted average number of shares of common stock and non-vested restricted stock awards outstanding for the period.

Diluted EPS is computed using the weighted average number of shares of common stock and non-vested restricted stock awards outstanding for the year, plus the effect of dilutive potential common shares outstanding during the period. The dilutive effect of common stock equivalents is determined using the more dilutive of the two-class method or alternative methods. The Company uses the treasury stock method to determine the potentially dilutive impact of our employee stock options and restricted stock units, and the contingently issuable method for our performance-based restricted stock unit awards.

For both the three and nine months ended September 30, 2020, options to purchase 0.5 million shares of the Company's common stock, respectively, had an anti-dilutive effect on EPS, and accordingly, are excluded from the calculation of diluted EPS. For the three and nine months ended September 30, 2019, options to purchase 0.2 million and 0.5 million shares of the Company's common stock, respectively, had an anti-dilutive effect on EPS, and accordingly, are excluded from the calculation of diluted EPS.

The following table reconciles Net income to basic and diluted EPS:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in millions, except per share data)	2020	2019	2020	2019
Net income	$ 25.3	$ 28.4	$ 70.1	$ 78.7
Weighted average shares outstanding – Basic	60.3	60.2	60.3	60.1
Dilutive effect of common stock equivalents	1.0	1.2	1.2	1.2
Weighted average shares outstanding – Diluted	61.3	61.4	61.5	61.3
Earnings per share:				
Basic	$ 0.42	$ 0.47	$ 1.16	$ 1.31
Diluted	0.41	0.46	1.14	1.28

NOTE 10 – STOCKHOLDERS' EQUITY

Dividends

On February 19, 2020, the Company's Board of Directors (the "Board") declared a quarterly cash dividend of $0.08 per common share. The dividend totaled $4.8 million and was distributed on March 31, 2020 to holders of record at the close of business on March 18, 2020.

On April 21, 2020, the Board declared a quarterly cash dividend of $0.08 per common share. The dividend totaled $4.9 million and was distributed on June 2, 2020 to holders of record at the close of business on May 15, 2020.

On July 27, 2020, the Board declared a quarterly cash dividend of $0.08 per common share. The dividend totaled $4.8 million and was distributed on September 4, 2020 to holders of record at the close of business on August 21, 2020.

During the three and nine months ended September 30, 2019, dividends of $4.9 million and $14.5 million were paid to stockholders.

On October 27, 2020, the Board declared a quarterly cash dividend of $0.08 per common share payable on December 1, 2020 to holders of record at the close of business on November 19, 2020.

Stock Repurchase Program

In November 2014, the Board authorized a stock repurchase program (the "November 2014 program") of up to $75.0 million of the Company's common stock.

On March 13, 2020, the Board authorized an additional stock repurchase program (the "March 2020 program") of up to $75.0 million of the Company's common stock. The March 2020 program supplements the Board's prior authorization under the November 2014 program, which remains in effect.

The stock repurchase programs are intended primarily to facilitate purchases of Company stock as a means to provide cash returns to stockholders, enhance stockholder returns and manage the Company's capital structure. Under its stock repurchase programs, the Company is authorized to repurchase, from time to time, shares of its outstanding common stock. Stock repurchases by the Company are subject to market conditions and other factors and may be commenced, suspended or discontinued at any time.

During the three and nine months ended September 30, 2020, the Company repurchased 7,227 and 498,217 shares for a total of $0.2 million and $13.7 million, respectively, under the stock repurchase program.

During the nine months ended September 30, 2019, the Company repurchased 48,409 shares for a total of $1.0 million under the stock repurchase program.

Accumulated Other Comprehensive Loss

The following tables summarize the changes in each component of Accumulated other comprehensive loss, net of tax in the three months ended September 30, 2020 and 2019:

(in millions) [a]	Actuarial Losses	Prior Service Costs	Foreign Currency Translation	Unrealized Gain (Loss) on Interest Rate Swaps	Total
Balance at July 1, 2020	$ (77.8)	$ (2.3)	$ (12.0)	$ (2.6)	$ (94.7)
Other comprehensive (loss) income before reclassifications	(0.4)	—	4.4	—	4.0
Amounts reclassified from accumulated other comprehensive loss	0.7	—	—	0.1	0.8
Net current-period other comprehensive income	0.3	—	4.4	0.1	4.8
Balance at September 30, 2020	$ (77.5)	$ (2.3)	$ (7.6)	$ (2.5)	$ (89.9)

(in millions) [a]	Actuarial Losses	Prior Service Costs	Foreign Currency Translation	Unrealized Gain (Loss) on Interest Rate Swaps	Total
Balance at July 1, 2019	$ (86.0)	$ (2.4)	$ (8.1)	$ 0.3	$ (96.2)
Other comprehensive income (loss) before reclassifications	0.5	—	(3.8)	0.1	(3.2)
Amounts reclassified from accumulated other comprehensive loss	0.8	—	—	(0.2)	0.6
Net current-period other comprehensive income (loss)	1.3	—	(3.8)	(0.1)	(2.6)
Balance at September 30, 2019	$ (84.7)	$ (2.4)	$ (11.9)	$ 0.2	$ (98.8)

The following tables summarize the changes in each component of Accumulated other comprehensive loss, net of tax in the nine months ended September 30, 2020 and 2019:

(in millions) [a]	Actuarial Losses	Prior Service Costs	Foreign Currency Translation	Unrealized Gain (Loss) on Interest Rate Swaps	Total
Balance at January 1, 2020	$ (80.4)	$ (2.4)	$ (7.1)	$ 0.8	$ (89.1)
Other comprehensive income (loss) before reclassifications	0.8	—	(0.5)	(3.4)	(3.1)
Amounts reclassified from accumulated other comprehensive loss	2.1	0.1	—	0.1	2.3
Net current-period other comprehensive income (loss)	2.9	0.1	(0.5)	(3.3)	(0.8)
Balance at September 30, 2020	$ (77.5)	$ (2.3)	$ (7.6)	$ (2.5)	$ (89.9)

(in millions) [(a)]	Actuarial Losses	Prior Service Costs	Foreign Currency Translation	Unrealized Gain (Loss) on Interest Rate Swaps	Total
Balance at January 1, 2019	$ (87.4)	$ (2.5)	$ (8.9)	$ 1.5	$ (97.3)
Other comprehensive income (loss) before reclassifications	0.7	—	(3.0)	(0.6)	(2.9)
Amounts reclassified from accumulated other comprehensive loss	2.0	0.1	—	(0.7)	1.4
Net current-period other comprehensive income (loss)	2.7	0.1	(3.0)	(1.3)	(1.5)
Balance at September 30, 2019	$ (84.7)	$ (2.4)	$ (11.9)	$ 0.2	$ (98.8)

(a) Amounts in parentheses indicate losses.

The following table summarizes the amounts reclassified from Accumulated other comprehensive loss, net of tax, in the three months ended September 30, 2020 and 2019 and the affected line item in the Condensed Consolidated Statements of Operations:

Details about Accumulated Other Comprehensive Loss Components	Amount Reclassified from Accumulated Other Comprehensive Loss		Affected Line Item in Condensed Consolidated Statements of Operations
	2020	2019	
(in millions) [(a)]			
Amortization of actuarial losses of defined benefit pension plans	$ (1.0)	$ (1.0)	Other (income) expense, net
Amortization of prior service costs of defined benefit pension plans	—	—	Other (income) expense, net
Interest rate swaps	(0.2)	0.2	Interest expense
Total before tax	(1.2)	(0.8)	
Income tax benefit	0.4	0.2	Income tax expense
Total reclassifications for the period, net of tax	$ (0.8)	$ (0.6)	

(a) Amounts in parentheses indicate losses.

The following table summarizes the amounts reclassified from Accumulated other comprehensive loss, net of tax, in the nine months ended September 30, 2020 and 2019 and the affected line item in the Condensed Consolidated Statements of Operations:

Details about Accumulated Other Comprehensive Loss Components	Amount Reclassified from Accumulated Other Comprehensive Loss		Affected Line Item in Condensed Consolidated Statements of Operations
	2020	2019	
(in millions) [(a)]			
Amortization of actuarial losses of defined benefit pension plans	$ (2.8)	$ (2.5)	Other (income) expense, net
Amortization of prior service costs of defined benefit pension plans	(0.1)	(0.1)	Other (income) expense, net
Interest rate swaps	(0.2)	0.9	Interest expense
Total before tax	(3.1)	(1.7)	
Income tax benefit	0.8	0.3	Income tax expense
Total reclassifications for the period, net of tax	$ (2.3)	$ (1.4)	

(a) Amounts in parentheses indicate losses.

NOTE 11 – SEGMENT INFORMATION

The Company has two reportable segments: the Environmental Solutions Group and the Safety and Security Systems Group. Business units are organized under each reportable segment because they share certain characteristics, such as technology, marketing, distribution and product application, which create long-term synergies.

The following tables summarize the Company's operations by segment, including Net sales, Operating income (loss), and Total assets:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in millions)	2020	2019	2020	2019
Net sales:				
Environmental Solutions	$ 231.0	$ 254.0	$ 678.2	$ 740.7
Safety and Security Systems	48.8	54.8	157.8	166.2
Total net sales	$ 279.8	$ 308.8	$ 836.0	$ 906.9
Operating income (loss):				
Environmental Solutions	$ 33.0	$ 35.9	$ 91.0	$ 106.4
Safety and Security Systems	7.4	8.6	25.2	26.8
Corporate and eliminations	(6.4)	(5.9)	(18.6)	(22.5)
Total operating income	34.0	38.6	97.6	110.7
Interest expense	1.2	2.1	4.5	6.1
Other (income) expense, net	(0.1)	0.2	2.1	0.5
Income before income taxes	$ 32.9	$ 36.3	$ 91.0	$ 104.1

(in millions)	As of September 30, 2020	As of December 31, 2019
Total assets:		
Environmental Solutions	$ 940.9	$ 908.1
Safety and Security Systems	226.5	222.6
Corporate and eliminations	57.0	34.5
Total assets of continuing operations	1,224.4	1,165.2
Total assets of discontinued operations	0.3	0.3
Total assets	$ 1,224.7	$ 1,165.5

NOTE 12 – FAIR VALUE MEASUREMENTS

The Company uses a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy maximizes the use of observable inputs and minimizes the use of unobservable inputs. Observable inputs are developed based on market data obtained from independent sources, while unobservable inputs reflect the Company's assumptions about valuation based on the best information available in the circumstances. The three levels of inputs are classified as follows:

- Level 1 — quoted prices in active markets for identical assets or liabilities;
- Level 2 — observable inputs, other than quoted prices included in Level 1, such as quoted prices for markets that are not active, or other inputs that are observable or can be corroborated by observable market data; and
- Level 3 — unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities, including certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

In determining fair value, the Company uses various valuation approaches within the fair value measurement framework. The valuation methodologies used for the Company's assets and liabilities measured at fair value and their classification in the valuation hierarchy are summarized below:

Cash Equivalents

Cash equivalents primarily consist of time-based deposits and interest-bearing instruments with maturities of three months or less. The Company classified cash equivalents as Level 1 due to the short-term nature of these instruments and measured the fair value based on quoted prices in active markets for identical assets.

Interest Rate Swaps

As described in Note 5 – Debt, the Company may, from time to time, execute interest rate swaps as a means of fixing the floating interest rate component on a portion of its floating-rate debt. The Company classifies its interest rate swaps as Level 2 due to the use of a discounted cash flow model based on the terms of the contract and the interest rate curve (Level 2 inputs) to calculate the fair value of the swaps.

Contingent Consideration

The Company has a contingent obligation to transfer up to $15.5 million to the former owners of Mark Rite Lines Equipment Company, Inc. ("MRL"), a U.S. manufacturer of truck-mounted and ride-on road-marking and line-removal equipment acquired by the Company on July 1, 2019, if specified financial results are met over future reporting periods (i.e., an earn-out). Liabilities for contingent consideration are measured at fair value each reporting period, with the acquisition-date fair value included as part of the consideration transferred. Subsequent changes in fair value are included as a component of Acquisition and integration-related expenses on the Condensed Consolidated Statements of Operations.

The Company uses an income approach to value the contingent consideration obligation based on the present value of risk-adjusted future cash flows under either a scenario-based or option-pricing method, as appropriate. Due to the lack of relevant observable market data over fair value inputs, such as prospective financial information or probabilities of future events as of September 30, 2020, the Company has classified the contingent consideration liability within Level 3 of the fair value hierarchy outlined in ASC 820, *Fair Value Measurements*.

The following table summarizes the Company's assets and liabilities that are measured at fair value on a recurring basis as of September 30, 2020:

	Fair Value Measurement at Reporting Date Using			
(in millions)	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets:				
Cash equivalents	$ 34.4	$ —	$ —	$ 34.4
Liabilities:				
Contingent consideration	—	—	4.4	4.4
Interest rate swap	—	3.4	—	3.4

The following table provides a roll-forward of the fair value of recurring Level 3 fair value measurements in the three months ended September 30, 2020 and 2019:

(in millions)	2020	2019 (a) (b)
Contingent consideration liability, at July 1	$ 4.4	$ 7.6
Issuance of contingent consideration in connection with acquisitions	—	7.9
Settlements of contingent consideration liabilities	—	(7.6)
Foreign currency translation	—	—
Total losses included in earnings	0.0	0.1
Contingent consideration liability, at September 30	$ 4.4	$ 8.0

The following table provides a roll-forward of the fair value of recurring Level 3 fair value measurements in the nine months ended September 30, 2020 and 2019:

(in millions)	2020	2019 (a) (b)
Contingent consideration liability, at January 1	$ 4.3	$ 6.7
Issuance of contingent consideration in connection with acquisitions	—	7.9
Settlements of contingent consideration liabilities	—	(7.6)
Foreign currency translation	—	0.3
Total losses included in earnings	0.1	0.7
Contingent consideration liability, at September 30	$ 4.4	$ 8.0

(a) Activity in the three and nine months ended September 30, 2019 includes a contingent obligation to provide additional consideration to the former owners of Joe Johnson Equipment, Inc. and Joe Johnson Equipment (USA), Inc. based on the achievement of specified financial results over the three-year period following the closing of the acquisition. During the third quarter of 2019, the Company paid $7.6 million to settle this contingent consideration liability.

(b) The $7.9 million of contingent consideration that was issued in connection with acquisitions during the three and nine months ended September 30, 2019 represented the Company’s preliminary estimate of the fair value of the contingent consideration issued in connection with the acquisition of MRL. Upon finalizing the Company’s purchase price allocation during the fourth quarter of 2019, the estimated fair value of the contingent consideration was determined to be $4.1 million.

Item 2. ***Management's Discussion and Analysis of Financial Condition and Results of Operations.***

Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") is designed to provide information that is supplemental to, and should be read together with, the condensed consolidated financial statements and the accompanying notes contained in this Form 10-Q, as well as Federal Signal Corporation's Annual Report on Form 10-K for the year ended December 31, 2019. References herein to the "Company," "we," "our," or "us" refer collectively to Federal Signal Corporation and its subsidiaries. Information in MD&A is intended to assist the reader in obtaining an understanding of (i) the condensed consolidated financial statements, (ii) the Company's business segments and how the results of those segments impact the Company's results of operations and financial condition as a whole and (iii) how certain accounting principles affect the Company's condensed consolidated financial statements. The Company's results for interim periods should not be regarded as necessarily indicative of results that may be expected for the entire year, which may differ materially due to, among other things, the risk factors described under Part I, Item 1A, *Risk Factors*, of the Company's Annual Report on Form 10-K for the year ended December 31, 2019, which was filed with the SEC on February 27, 2020, and as updated in Part II, Item 1A, *Risk Factors*, of the Company's Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2020 and June 30, 2020, which were filed with the SEC on April 29, 2020 and July 29, 2020, respectively, and in this Form 10-Q.

Executive Summary

The Company is a leading global manufacturer and supplier of (i) vehicles and equipment for maintenance and infrastructure end-markets, including sewer cleaners, industrial vacuum loaders, vacuum- and hydro-excavation trucks (collectively, "safe-digging trucks"), street sweepers, road-marking and line-removal equipment, waterblasting equipment, dump truck bodies and trailers, and (ii) safety, security and communication equipment, such as lights, sirens and warning systems. In addition, we sell parts and provide service, repair, equipment rentals and training as part of a comprehensive aftermarket offering to our customer base. We operate 15 principal manufacturing facilities in five countries and provide products and integrated solutions to municipal, governmental, industrial and commercial customers in all regions of the world.

As described in Note 11 – Segment Information to the accompanying condensed consolidated financial statements, the Company's business units are organized in two reportable segments: the Environmental Solutions Group and the Safety and Security Systems Group.

COVID-19 Update

We continue to closely monitor the impact of the coronavirus ("COVID-19") pandemic on all aspects of our business, including how it is affecting our employees, customers, supply chain and distribution network. In February 2020, we established a cross-functional task force to monitor ongoing developments, implement mitigation plans and centrally coordinate our response to the pandemic.

Our businesses are considered to be essential in supporting critical infrastructure needs and public safety. While certain of our operations have been affected by temporary facility closures, either due to government-issued mandates or other concerns related to COVID-19, our facilities have remained substantially operational to date. Given that, our primary focus has been on the safety and well-being of our employees. We were proactive in procuring personal protective equipment and sanitizing supplies for our facilities. We also implemented a series of enhanced health and safety measures across the organization, such as reconfiguring work spaces and staggering manufacturing shifts to allow for social distancing, introducing temperature screening protocols, enhancing facility cleaning, limiting non-essential travel and restricting the number of visitors to our facilities. Further, we established remote working arrangements, where possible, supported by the use of virtual meeting capabilities. As many of the government-mandated stay-at-home orders were lifted throughout the course of the second quarter, the majority of our telecommuting employees have gradually returned to the workplace, following our enhanced safety protocols. We also modified our employee attendance policies and provided employees with additional paid time off in order to encourage those who were sick, had health concerns, or were otherwise adversely impacted by the pandemic, to remain at home.

As a result of the combination of these factors and the enactment of the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"), we experienced a decrease in labor availability at several of our facilities during the second quarter. While labor availability improved during the third quarter, we continued to experience labor-related disruptions, including several COVID-19-related quarantine absences. As we had anticipated, this resulted in a variety of challenges in running our operations efficiently, and we adjusted our production schedules, accordingly. We saw similar issues within our supply chain, with certain suppliers temporarily shut down. Our procurement teams have worked diligently with our key suppliers to effectively secure safety stock and manage inventory levels and, in some circumstances, have identified alternate suppliers and in-sourcing opportunities in order to mitigate the impact of supply-chain disruptions on production.

The government-mandated stay-at-home orders and travel and visitor restrictions significantly impacted the Company's sales and marketing activities during the second quarter, with limited ability to attend trade shows and conduct equipment demonstrations and in-person sales meetings. In addition, certain customers were unable to take delivery of equipment given travel restrictions and the limited personnel that they had available. These factors significantly impacted order intake and operating results during the second quarter. However, as the second quarter progressed, many of the government-mandated restrictions that were imposed in states across the U.S. started to ease, albeit at different times, and at different levels. With business-related travel steadily increasing during the third quarter, our sales teams have been able to increase the amount of equipment demonstrations. That has helped contribute to sequential order improvement, with our third quarter orders up $64.5 million, or 32%, compared to the second quarter.

The timing of production and realization of our backlog, which totaled $319.7 million as of September 30, 2020, may be delayed or otherwise negatively impacted by our ability to continue to run our operations as an essential business during the COVID-19 pandemic and/or to return to our normal production capacity, faced with the ongoing potential for adverse impacts associated with decreased labor availability, the temporary suspension of production activity mandated or otherwise made necessary by governmental authorities, weakened demand, supply chain disruptions, or other production delays. Such factors have adversely affected the comparability of our operating and financial results for the three and nine months ended September 30, 2020 with the corresponding periods of the prior year, and may continue to impact comparability in subsequent quarters. We are responding accordingly, taking steps to manage through these challenging times, including implementing measures to reduce costs and manage our capital prudently. At the same time, we are maintaining our focus on our eighty-twenty improvement initiatives.

In an effort to mitigate the financial statement impact of these pandemic-related operational challenges, we implemented the following cost-saving actions:

- Temporary salary reductions ranging from 20% to 25% during the second quarter for approximately 60 members of the Company's enterprise leadership team, including executive officers;
- Temporary reduction in Board of Directors fees ranging from 22.5% to 25% during the second quarter;
- Roll-back of 2020 merit-based salary increases for most domestic salaried employees, effective in the third quarter;
- Temporary furloughs of approximately 400 employees, primarily within the second quarter;
- Permanent reductions in force impacting approximately 200 employees; and
- Limited discretionary spending, primarily within Selling, engineering, general and administrative ("SEG&A") expenses, including travel and entertainment expenses.

We are continuing to approach the uncertainty and challenges with resolve and from a position of strength given our current financial position. As of September 30, 2020, we had $66.2 million of cash and cash equivalents and $250.6 million of availability for borrowings under our five-year revolving credit facility, which we executed in July 2019.

However, the overall magnitude of the impact of the pandemic on our operating and financial results remains uncertain and will largely depend on the duration of the pandemic and the measures implemented in response, as well as the effect on our customers. Given these factors, we are unable to reliably forecast the effect that the pandemic will have on our financial condition, results of operations or cash flows, which could be material.

Operating Results

Net sales decreased by $29.0 million, or 9%, in the three months ended September 30, 2020 as compared to the prior-year quarter. Our Environmental Solutions Group reported a net sales decrease of $23.0 million, or 9%, primarily due to decreases in shipments of industrial vacuum loaders, road-marking and line-removal equipment, street sweepers, dump truck bodies, and waterblasting equipment of $10.4 million, $6.1 million, $5.1 million, $2.9 million, and $2.3 million, respectively, partially offset by a $4.1 million increase in shipments of sewer cleaners. Within our Safety and Security Systems Group, net sales decreased by $6.0 million, or 11%, primarily due to lower sales of industrial signaling equipment and public safety equipment.

For the nine months ended September 30, 2020, net sales decreased by $70.9 million, or 8%, as compared to the corresponding period of the prior year. Within our Environmental Solutions Group, net sales decreased by $62.5 million, or 8%, largely due to decreases in shipments of safe-digging trucks, industrial vacuum loaders, street sweepers, sewer cleaners, waterblasting equipment, trailers, and dump truck bodies of $18.2 million, $13.8 million, $10.7 million, $8.1 million, $7.7 million, $4.4 million, and $3.8 million, respectively, and an unfavorable foreign currency translation impact of $1.9 million. In addition, aftermarket revenues decreased by $4.4 million. Partially offsetting these reductions was a $15.1 million increase in shipments of road-marking and line-removal equipment, associated with the acquisition of Mark Rite Lines Equipment Company, Inc. ("MRL"), which was completed in the third quarter of 2019. In our Safety and Security Systems Group, net sales decreased by $8.4 million, or 5%, primarily due to lower domestic sales of industrial signaling equipment and public safety equipment, partially offset by higher international sales of public safety equipment.

Operating income decreased by $4.6 million, or 12%, to $34.0 million in the three months ended September 30, 2020 as compared to the prior-year quarter, primarily driven by reductions of $2.9 million and $1.2 million within our Environmental Solutions Group and our Safety and Security Systems Group, respectively, and a $0.5 million increase in Corporate expenses. Consolidated operating margin for the three months ended September 30, 2020 was 12.2%, compared to 12.5% in the prior-year quarter.

For the nine months ended September 30, 2020, operating income decreased by $13.1 million, or 12%, as compared to the corresponding period of the prior year, primarily driven by reductions of $15.4 million and $1.6 million within our Environmental Solutions Group and our Safety and Security Systems Group, respectively, partially offset by a $3.9 million decrease in Corporate expenses. Consolidated operating margin for the nine months ended September 30, 2020 was 11.7%, compared to 12.2% in the prior-year period.

Income before income taxes for the three months ended September 30, 2020 decreased by $3.4 million, or 9%, compared to the prior-year quarter. The decrease resulted from the reduced operating income, partially offset by a $0.3 million increase in other income and a $0.9 million reduction in interest expense.

For the nine months ended September 30, 2020, income before income taxes decreased by $13.1 million, or 13%, compared to the prior-year period. The decrease resulted from the reduced operating income and a $1.6 million increase in other expense, partially offset by a $1.6 million reduction in interest expense.

Net income for the three months ended September 30, 2020 decreased by $3.1 million compared to the prior-year period, largely due to the aforementioned decrease in income before income taxes, partially offset by a $0.3 million reduction in income tax expense.

For the nine months ended September 30, 2020, net income decreased by $8.6 million compared to the corresponding period of the prior year, largely due to the aforementioned decrease in income before income taxes, partially offset by a $4.5 million reduction in income tax expense. The decrease in income tax expense was largely due to lower pre-tax income levels, and the recognition of $2.3 million more excess tax benefits from stock compensation activity, compared to the prior-year period. The effective tax rate for the three and nine months ended September 30, 2020 was 23.1% and 23.0%, respectively. We currently expect our full-year effective tax rate to be approximately 24%.

Total orders for the three and nine months ended September 30, 2020, were $265.8 million and $771.0 million, respectively, compared to $328.8 million and $935.8 million, respectively, in the corresponding periods of the prior year. Orders in each of the prior-year periods included $26.7 million of backlog acquired in connection with the MRL transaction.

Our consolidated backlog at September 30, 2020 was $319.7 million, a decrease of $47.2 million, or 13%, compared to the end of the prior-year quarter.

Results of Operations

The following table summarizes our Condensed Consolidated Statements of Operations and illustrates the key financial indicators used to assess our consolidated financial results:

	Three Months Ended September 30,			Nine Months Ended September 30,		
($ in millions, except per share data)	**2020**	**2019**	**Change**	**2020**	**2019**	**Change**
Net sales	$ 279.8	$ 308.8	$ (29.0)	$ 836.0	$ 906.9	$ (70.9)
Cost of sales	207.2	226.8	(19.6)	618.3	665.6	(47.3)
Gross profit	72.6	82.0	(9.4)	217.7	241.3	(23.6)
Selling, engineering, general and administrative expenses	38.4	43.0	(4.6)	118.0	128.7	(10.7)
Acquisition and integration-related expenses	0.2	0.4	(0.2)	0.8	1.9	(1.1)
Restructuring	—	—	—	1.3	—	1.3
Operating income	34.0	38.6	(4.6)	97.6	110.7	(13.1)
Interest expense	1.2	2.1	(0.9)	4.5	6.1	(1.6)
Other (income) expense, net	(0.1)	0.2	(0.3)	2.1	0.5	1.6
Income before income taxes	32.9	36.3	(3.4)	91.0	104.1	(13.1)
Income tax expense	7.6	7.9	(0.3)	20.9	25.4	(4.5)
Net income	$ 25.3	$ 28.4	$ (3.1)	$ 70.1	$ 78.7	$ (8.6)
Operating data:						
Operating margin	12.2 %	12.5 %	(0.3)%	11.7 %	12.2 %	(0.5)%
Diluted earnings per share	$ 0.41	$ 0.46	$ (0.05)	$ 1.14	$ 1.28	$ (0.14)
Total orders	265.8	328.8	(63.0)	771.0	935.8	(164.8)
Backlog	319.7	366.9	(47.2)	319.7	366.9	(47.2)
Depreciation and amortization	11.2	10.8	0.4	33.1	30.1	3.0

Net sales

Net sales decreased by $29.0 million, or 9%, in the three months ended September 30, 2020 as compared to the prior-year quarter. The Environmental Solutions Group reported a net sales decrease of $23.0 million, or 9%, primarily due to decreases in shipments of industrial vacuum loaders, road-marking and line-removal equipment, street sweepers, dump truck bodies, and waterblasting equipment of $10.4 million, $6.1 million, $5.1 million, $2.9 million, and $2.3 million, respectively, partially offset by a $4.1 million increase in shipments of sewer cleaners. Within the Safety and Security Systems Group, net sales decreased by $6.0 million, or 11%, primarily due to lower sales of industrial signaling equipment and public safety equipment.

For the nine months ended September 30, 2020, net sales decreased by $70.9 million, or 8%, as compared to the corresponding period of the prior year. Within the Environmental Solutions Group, net sales decreased by $62.5 million, or 8%, largely due to decreases in shipments of safe-digging trucks, industrial vacuum loaders, street sweepers, sewer cleaners, waterblasting equipment, trailers, and dump truck bodies of $18.2 million, $13.8 million, $10.7 million, $8.1 million, $7.7 million, $4.4 million, and $3.8 million, respectively, and an unfavorable foreign currency translation impact of $1.9 million. In addition, aftermarket revenues decreased by $4.4 million. Partially offsetting these reductions was a $15.1 million increase in shipments of road-marking and line-removal equipment. In the Safety and Security Systems Group, net sales decreased by $8.4 million, or 5%, primarily due to lower domestic sales of industrial signaling equipment and public safety equipment, partially offset by higher international sales of public safety equipment.

Cost of sales

Cost of sales decreased by $19.6 million, or 9%, for the three months ended September 30, 2020 compared to the prior-year quarter, largely due to a decrease of $17.6 million, or 9%, within the Environmental Solutions Group, primarily attributable to lower sales volumes. Within the Safety and Security Systems Group, cost of sales decreased by $2.0 million, or 6%, primarily related to lower sales volumes.

For the nine months ended September 30, 2020, cost of sales decreased by $47.3 million, or 7%, largely due to an decrease of $44.8 million, or 8%, within the Environmental Solutions Group, primarily attributable to lower sales volumes and a favorable foreign currency translation impact of $1.8 million, partially offset by the recognition of additional cost of sales from the MRL acquisition. Within the Safety and Security Systems Group, cost of sales decreased by $2.5 million, or 2%, for the nine months ended September 30, 2020, primarily related to lower sales volumes and a favorable foreign currency translation impact of $0.4 million.

Gross profit

Gross profit decreased by $9.4 million, or 11%, for the three months ended September 30, 2020, compared to the prior-year quarter, primarily due to reductions of $5.4 million and $4.0 million within the Environmental Solutions Group and the Safety and Security Systems Group, respectively. Gross margin for the three months ended September 30, 2020 was 25.9%, compared to 26.6% in the prior-year quarter, primarily due to the impact of lower sales volumes and unfavorable sales mix within the Safety and Security Systems Group.

For the nine months ended September 30, 2020, gross profit decreased by $23.6 million, or 10%, primarily due to reductions of $17.7 million and $5.9 million within the Environmental Solutions Group and the Safety and Security Systems Group, respectively. Gross margin for the nine months ended September 30, 2020 was 26.0%, compared to 26.6% in the prior-year period, primarily driven by reductions within the Safety and Security Group and Environmental Solutions Group of 170 basis points and 40 basis points, respectively.

Selling, engineering, general and administrative expenses

SEG&A expenses for the three months ended September 30, 2020 decreased by $4.6 million, or 11%, primarily due to reductions in SEG&A expenses within the Safety and Security Systems Group and the Environmental Solutions Group of $2.8 million and $2.5 million, respectively, partially offset by a $0.7 million increase in Corporate SEG&A expenses. As a percentage of net sales, SEG&A expenses were 13.7% in the current-year quarter, down from 13.9% in the prior-year quarter.

For the nine months ended September 30, 2020, SEG&A expenses decreased by $10.7 million, or 8%, primarily due to reductions in SEG&A expenses within the Safety and Security Systems Group, Corporate, and the Environmental Solutions Group of $4.6 million, $3.9 million, and $2.2 million, respectively. Such reductions were due, in part, to cost-saving actions implemented in response to the COVID-19 pandemic. As a percentage of net sales, SEG&A expenses were 14.1% in the current-year period, down from 14.2% in the prior-year period.

Operating income

Operating income decreased by $4.6 million, or 12%, to $34.0 million in the three months ended September 30, 2020 as compared to the prior-year quarter, primarily driven by reductions of $2.9 million and $1.2 million within the Environmental Solutions Group and the Safety and Security Systems Group, respectively, and a $0.5 million increase in Corporate expenses. Consolidated operating margin for the three months ended September 30, 2020 was 12.2%, compared to 12.5% in the prior-year quarter.

For the nine months ended September 30, 2020, operating income decreased by $13.1 million, or 12%, as compared to the corresponding period of the prior year, primarily driven by reductions of $15.4 million and $1.6 million within the Environmental Solutions Group and the Safety and Security Systems Group, respectively, partially offset by a $3.9 million decrease in Corporate expenses. Consolidated operating margin for the nine months ended September 30, 2020 was 11.7%, compared to 12.2% in the prior-year period.

Interest expense

Interest expense for the three and nine months ended September 30, 2020 decreased by $0.9 million and $1.6 million, respectively, in comparison to the corresponding periods in the prior year. The reductions in both periods were largely due to lower interest rates when compared to the prior-year periods.

Other (income) expense, net

For the three months ended September 30, 2020, other income of $0.1 million was realized, whereas in the prior-year quarter, other expense of $0.2 million was recognized.

For the nine months ended September 30, 2020, other expense totaled $2.1 million, compared to $0.5 million in the prior-year period, with the increase largely due to the recognition of a $2.5 million charge associated with the withdrawal from a multi-employer pension plan.

Income tax expense

The Company recognized income tax expense of $7.6 million and $7.9 million for the three months ended September 30, 2020 and 2019, respectively. The decrease in tax expense in the current-year quarter was largely due to lower pre-tax income levels, and the recognition of $0.7 million more excess tax benefits from stock compensation activity, compared to the prior-year quarter. The Company’s effective tax rate for the three months ended September 30, 2020 was 23.1%, compared to 21.8% in the prior-year quarter, when the Company also recognized a $0.6 million benefit associated with the completion of a tax audit.

For the nine months ended September 30, 2020 and 2019, the Company recognized income tax expense of $20.9 million and $25.4 million, respectively. The decrease in tax expense in the current year was largely due to lower pre-tax income levels, and the recognition of $2.3 million more excess tax benefits from stock compensation activity, compared to the prior-year period. The Company’s effective tax rate for the nine months ended September 30, 2020 was 23.0%, compared to 24.4% in the prior-year period.

Net income

Net income for the three months ended September 30, 2020 decreased by $3.1 million compared to the prior-year period, largely due to the aforementioned reduction in operating income, partially offset by the $0.9 million reduction in interest expense, the $0.3 million increase in other income, and the $0.3 million decrease in income tax expense.

For the nine months ended September 30, 2020, net income decreased by $8.6 million compared to the corresponding period of the prior year, largely due to the aforementioned reduction in operating income and the $1.6 million increase in other expense, partially offset by the $1.6 million reduction in interest expense, and the $4.5 million decrease in income tax expense.

Environmental Solutions

The following table summarizes the Environmental Solutions Group’s operating results as of and for the three and nine months ended September 30, 2020 and 2019:

	Three Months Ended September 30,			Nine Months Ended September 30,		
($ in millions)	**2020**	**2019**	**Change**	**2020**	**2019**	**Change**
Net sales	$ 231.0	$ 254.0	$ (23.0)	$ 678.2	$ 740.7	$ (62.5)
Operating income	33.0	35.9	(2.9)	91.0	106.4	(15.4)
Operating data:						
Operating margin	14.3 %	14.1 %	0.2 %	13.4 %	14.4 %	(1.0)%
Total orders	$ 220.0	$ 270.2	$ (50.2)	$ 615.2	$ 767.1	$ (151.9)
Backlog	292.6	337.8	(45.2)	292.6	337.8	(45.2)
Depreciation and amortization	10.4	10.0	0.4	30.6	27.5	3.1

Three months ended September 30, 2020 vs. three months ended September 30, 2019

Total orders in the three months ended September 30, 2020 decreased by $50.2 million, or 19%, in comparison to the prior-year quarter, which included $26.7 million of backlog acquired in connection with the MRL transaction. U.S. orders decreased by $66.3 million, or 30%, primarily due to reductions in orders for street sweepers, road-marking equipment, sewer cleaners, and safe-digging trucks of $20.6 million, $17.1 million, $14.9 million, and $9.4 million, respectively. In addition, aftermarket demand decreased by $10.8 million. Partially offsetting these reductions were increases in orders for trailers and dump truck bodies of $7.1 million and $2.7 million, respectively. Non-U.S. orders increased by $16.1 million, or 35%, primarily due to an $18.6 million increase in orders for refuse trucks and a $3.6 million improvement in aftermarket demand, partially offset by decreases in orders for street sweepers and sewer cleaners of $3.4 million and $2.3 million, respectively.

Net sales decreased by $23.0 million, or 9%, for the three months ended September 30, 2020. U.S. sales decreased by $29.6 million, or 14%, largely due to decreases in shipments of industrial vacuum loaders, road-marking equipment, street sweepers, dump truck bodies, and waterblasting equipment of $10.4 million, $6.1 million, $4.0 million, $3.0 million and $2.3 million, respectively. In addition, aftermarket revenues decreased by $5.8 million. Partially offsetting these reductions was a $3.1 million increase in shipments of sewer cleaners. Non-U.S. sales increased by $6.6 million, or 18%, primarily due to a $6.3 million increase in aftermarket demand, largely attributable to higher used equipment sales.

Cost of sales decreased by $17.6 million, or 9%, for the three months ended September 30, 2020, primarily due to lower sales volumes. Gross margin for the three months ended September 30, 2020 was 23.7%, unchanged from the prior-year quarter.

SEG&A expenses decreased by $2.5 million for the three months ended September 30, 2020, primarily due to the effects of cost-saving actions implemented in response to the COVID-19 pandemic, which included reductions in travel and entertainment expenses, and marketing expenses. As a percentage of net sales, SEG&A expenses were 9.4% in the current-year quarter, compared to 9.5% in the prior-year quarter.

Operating income for the three months ended September 30, 2020 decreased by $2.9 million, largely due to a $5.4 million reduction in gross profit, partially offset by the $2.5 million reduction in SEG&A expenses.

Nine months ended September 30, 2020 vs. nine months ended September 30, 2019

Total orders decreased by $151.9 million, or 20%, for the nine months ended September 30, 2020. U.S. orders decreased by $140.7 million, or 23%, primarily due to reductions in orders for safe-digging trucks, sewer cleaners, street sweepers, industrial vacuum loaders and dump truck bodies of $45.2 million, $40.9 million, $25.1 million, $22.5 million, and $7.6 million, respectively. In addition, aftermarket demand decreased by $8.7 million. Partially offsetting these reductions was a $12.3 million increase in orders for trailers. Non-U.S. orders decreased by $11.2 million, or 7%, primarily due to decreases in orders for safe-digging trucks, sewer cleaners, street sweepers, snow-removal equipment, and waterblasting equipment of $7.3 million, $6.9 million, $4.2 million, $2.0 million, and $1.9 million, respectively, and an unfavorable foreign currency translation impact of $1.7 million. In addition, aftermarket demand decreased by $2.4 million. Partially offsetting these reductions was a $15.2 million increase in orders for refuse equipment.

Net sales decreased by $62.5 million, or 8%, for the nine months ended September 30, 2020. U.S. sales decreased by $44.4 million, or 7%, largely due to decreases in shipments of industrial vacuum loaders, street sweepers, safe-digging trucks, waterblasting equipment, dump truck bodies, and trailers of $13.8 million, $11.4 million, $9.8 million, $5.9 million, $4.4 million, and $4.4 million, respectively. In addition, aftermarket revenues decreased by $4.7 million. Partially offsetting these reductions was a $14.0 million increase in shipments of road-marking and line-removal equipment. Non-U.S. sales decreased by $18.1 million, or 13%, primarily due to decreases in sales of safe-digging trucks and sewer cleaners of $8.4 million and $5.7 million, respectively, and an unfavorable foreign currency translation impact of $1.9 million.

Cost of sales decreased by $44.8 million, or 8%, for the nine months ended September 30, 2020, primarily attributable to lower sales volumes and a favorable foreign currency translation impact of $1.8 million, partially offset by the recognition of additional cost of sales from the MRL acquisition. Gross margin for the nine months ended September 30, 2020 was 23.3%, compared to 23.7% in the prior-year period, with the decrease primarily attributable to a reduction in operating leverage with lower sales volumes.

SEG&A expenses decreased by $2.2 million for the nine months ended September 30, 2020, primarily due to cost saving actions implemented in response to the COVID-19 pandemic, partially offset by the addition of expenses of businesses acquired in the prior year and a $0.8 million increase in amortization expense. As a percentage of net sales, SEG&A expenses were 9.8% in the current-year period, compared to 9.2% in the prior-year period.

Operating income for the nine months ended September 30, 2020 decreased by $15.4 million, largely due to a $17.7 million reduction in gross profit and the recognition of $0.7 million of restructuring charges, partially offset by the $2.2 million reduction in SEG&A expenses and an $0.8 million decrease in acquisition-related expenses.

Backlog was $292.6 million at September 30, 2020, compared to $337.8 million at September 30, 2019.

Safety and Security Systems

The following table summarizes the Safety and Security Systems Group's operating results as of and for the three and nine months ended September 30, 2020 and 2019:

	Three Months Ended September 30,			Nine Months Ended September 30,		
($ in millions)	**2020**	**2019**	**Change**	**2020**	**2019**	**Change**
Net sales	$ 48.8	$ 54.8	$ (6.0)	$ 157.8	$ 166.2	$ (8.4)
Operating income	7.4	8.6	(1.2)	25.2	26.8	(1.6)
Operating data:						
Operating margin	15.2 %	15.7 %	(0.5)%	16.0 %	16.1 %	(0.1)%
Total orders	$ 45.8	$ 58.6	$ (12.8)	$ 155.8	$ 168.7	$ (12.9)
Backlog	27.1	29.1	(2.0)	27.1	29.1	(2.0)
Depreciation and amortization	0.8	0.8	—	2.5	2.5	—

Three months ended September 30, 2020 vs. three months ended September 30, 2019

Total orders for the three months ended September 30, 2020 decreased by $12.8 million, or 22%, compared with the prior-year quarter. U.S. orders decreased by $7.9 million, primarily due to reductions in orders for public safety equipment, warning systems and industrial signaling equipment of $3.7 million, $2.3 million and $1.9 million, respectively. Non-U.S. orders decreased by $4.9 million, largely due to reductions in orders for public safety equipment, industrial signaling equipment and warning systems of $3.7 million, $0.8 million, and $0.6 million, respectively.

Net sales decreased by $6.0 million, or 11%, for the three months ended September 30, 2020. U.S. sales decreased by $3.8 million, primarily driven by reductions in sales of industrial signaling equipment and public safety equipment of $2.2 million and $2.0 million, respectively, partially offset by a $0.4 million increase in sales of warning systems. Non-U.S. sales decreased by $2.2 million, largely due to reductions in sales of industrial signaling equipment and warning systems of $1.1 million and $0.9 million.

Cost of sales decreased by $2.0 million, or 6%, for the three months ended September 30, 2020, primarily related to lower sales volumes. Gross margin for the three months ended September 30, 2020 was 36.7%, compared to 40.0% in the prior-year quarter, with the decrease primarily attributable to unfavorable sales mix.

SEG&A expenses for the three months ended September 30, 2020 decreased by $2.8 million, or 21%, in comparison to the prior-year quarter, primarily as a result of cost-saving actions implemented in response to the COVID-19 pandemic. As a percentage of net sales, SEG&A expenses decreased from 24.3% in the prior-year quarter, to 21.5% in the current-year quarter.

Operating income decreased by $1.2 million, or 14%, for the three months ended September 30, 2020, primarily due to the $4.0 million reduction in gross profit, partially offset by the $2.8 million reduction in SEG&A expenses.

Nine months ended September 30, 2020 vs. nine months ended September 30, 2019

Total orders decreased by $12.9 million, or 8%, for the nine months ended September 30, 2020. U.S. orders decreased by $10.0 million, primarily due to reductions in orders for industrial signaling equipment and public safety equipment of $6.0 million and $5.2 million, respectively, partially offset by a $1.2 million improvement in orders for warning systems. Non-U.S. orders decreased by $2.9 million, primarily due to reductions in orders for industrial signaling equipment and warning systems of $1.4 million and $1.0 million, respectively, and an unfavorable foreign currency translation impact of $0.8 million. These reductions were partially offset by a $0.3 million improvement in orders for public safety equipment.

Net sales decreased by $8.4 million, or 5%, for the nine months ended September 30, 2020. U.S. sales decreased by $10.3 million, primarily driven by reductions in sales of public safety equipment and industrial signaling equipment of $6.1 million and $5.5 million, respectively, partially offset by a $1.3 million increase in sales of warning systems. Non-U.S. sales increased by $1.9 million, largely due to a $5.3 million increase in sales of public safety equipment, partially offset by reductions in sales of warning systems and industrial signaling equipment of $1.7 million and $1.1 million, respectively, and an unfavorable foreign currency translation impact of $0.6 million.

Cost of sales decreased by $2.5 million, or 2%, for the nine months ended September 30, 2020, primarily related to lower sales volumes and a favorable foreign currency translation impact of $0.4 million. Gross margin for the nine months ended September 30, 2020 was 37.7%, compared to 39.4% in the prior-year period, with the decrease primarily attributable to unfavorable sales mix.

SEG&A expenses for the nine months ended September 30, 2020 decreased by $4.6 million, or 12%, in comparison to the prior-year period, primarily as a result of cost-saving actions implemented in response to the COVID-19 pandemic. As a percentage of net sales, SEG&A expenses decreased from 23.2% in the prior-year period, to 21.5% in the current-year period.

Operating income decreased by $1.6 million, or 6%, for the nine months ended September 30, 2020. The decrease was primarily attributable to the $5.9 million reduction in gross profit and restructuring charges of $0.3 million, partially offset by the $4.6 million reduction in SEG&A expenses.

Backlog was $27.1 million at September 30, 2020, compared to $29.1 million at September 30, 2019.

Corporate Expenses

Corporate operating expenses for the three months ended September 30, 2020 were $6.4 million, up from $5.9 million in the prior-year quarter, with the increase primarily due to higher post-employment expenses.

Corporate operating expenses for the nine months ended September 30, 2020 were $18.6 million, down from $22.5 million in the prior-year quarter. The $3.9 million decrease was primarily due to reductions in post-employment expenses, incentive-based compensation costs and employee costs, including the effects of cost-saving actions implemented in response to the COVID-19 pandemic.

Seasonality of Company's Business

Certain of the Company's businesses are susceptible to the influences of seasonal factors, including buying patterns, delivery patterns and productivity influences from holiday periods and weather. In general, the Company tends to have lower equipment sales in the first calendar quarter of each year compared to other quarters as a result of these factors. In addition, rental income and parts sales are generally higher in the second and third quarters of the year, because many of the Company's products are used for maintenance activities in North America, where usage is typically lower during periods of harsher weather conditions. Due to the potential for adverse impacts associated with the current COVID-19 pandemic, the Company's results in 2020 may not reflect the same seasonal trends as in prior years.

Financial Condition, Liquidity and Capital Resources

The Company uses its cash flow from operations to fund growth and to make capital investments that sustain its operations, reduce costs, or both. Beyond these uses, remaining cash is used to pay down debt, repurchase shares, fund dividend payments and make pension contributions. The Company may also choose to invest in the acquisition of businesses. In the absence of significant unanticipated cash demands, we believe that the Company's existing cash balances, cash flow from operations and borrowings available under the 2019 Credit Agreement will provide funds sufficient for these purposes. As of September 30, 2020, there was $238.2 million of cash drawn and $11.2 million of undrawn letters of credit under the 2019 Credit Agreement, with $250.6 million of availability for borrowings. However, as described in Part II, Item 1A, *Risk Factors*, the current COVID-19 pandemic may materially adversely affect the Company's business, financial condition and operating results, including its cash flows. The net cash flows associated with the Company's rental equipment transactions are included in cash flow from operating activities.

The Company's cash and cash equivalents totaled $66.2 million and $31.6 million as of September 30, 2020 and December 31, 2019, respectively. As of September 30, 2020, $21.4 million of cash and cash equivalents was held by foreign subsidiaries. Cash and cash equivalents held by subsidiaries outside the U.S. typically are held in the currency of the country in which it is located. The Company uses this cash to fund the operating activities of its foreign subsidiaries and for further investment in foreign operations. Generally, the Company has considered such cash to be permanently reinvested in its foreign operations and the Company's current plans do not demonstrate a need to repatriate such cash to fund U.S. operations. However, in the event that these funds are needed to fund U.S. operations or to satisfy U.S. obligations, they generally could be repatriated. The repatriation of these funds may cause the Company to incur additional U.S. income tax expense, dependent on income tax laws and other circumstances at the time any such amounts are repatriated.

Net cash of $79.6 million was provided by operating activities in the nine months ended September 30, 2020, compared to $58.6 million in the prior-year period. The year-over-year improvement in operating cash flow was primarily due to working capital timing differences, inclusive of actions taken to preserve short-term liquidity in response to the COVID-19 pandemic, lower rental fleet investment in comparison to the prior year, and the deferral of certain payments in the current year in accordance with the provisions of the CARES Act, including $4.8 million of payroll tax payments. Partially offsetting these improvements was a $5.0 million increase in pension contributions in comparison to the prior-year period.

Net cash of $29.2 million was used for investing activities in the nine months ended September 30, 2020, compared to $70.3 million in the prior-year period. Capital expenditures in the nine months ended September 30, 2020 and 2019 were $24.3 million and $21.2 million, respectively. During the prior-year period, the Company paid an initial sum of $49.6 million to acquire MRL. In addition, during the nine months ended September 30, 2020, the Company paid $6.2 million to acquire certain assets and operations of Public Works Equipment and Supply, Inc. and received $0.8 million as part of the finalization of certain post-closing adjustments in connection with the acquisition of MRL.

Net cash of $16.0 million was used for financing activities in the nine months ended September 30, 2020, whereas in the prior-year period, $10.5 million of net cash was provided by financing activities. In the nine months ended September 30, 2020, the Company borrowed $20.5 million against its revolving credit facility, primarily to bolster the Company’s cash position in the short-term in light of the current uncertainty relating to the COVID-19 pandemic. The Company also funded cash dividends and share repurchases of $14.5 million and $13.7 million, respectively, and redeemed $9.0 million of stock in order to remit funds to tax authorities to satisfy employees’ tax withholdings following the vesting of stock-based compensation and the exercise of stock options. In the nine months ended September 30, 2019, the Company borrowed $37.5 million of debt, primarily to fund the acquisition of MRL, funded cash dividends and share repurchases of $14.5 million and $1.0 million, respectively, and redeemed $1.9 million of stock in order to remit funds to tax authorities to satisfy employees’ tax withholdings following the vesting of stock-based compensation.

The Company is subject to certain net leverage ratio and interest coverage ratio financial covenants under the 2019 Credit Agreement that are to be measured at each fiscal quarter-end. The Company was in compliance with all such covenants as of September 30, 2020.

The Company currently anticipates that capital expenditures for 2020, including investments associated with its ongoing plant expansions, will be in the range of $30 million to $35 million.

Contractual Obligations and Off-Balance Sheet Arrangements

During the nine months ended September 30, 2020, there have been no material changes in the Company’s contractual obligations and off-balance sheet arrangements as described in Item 7, *Management’s Discussion and Analysis of Financial Condition and Results of Operations*, of the Company’s Annual Report on Form 10-K for the year ended December 31, 2019.

Item 3. ***Quantitative and Qualitative Disclosures about Market Risk.***

See Item 7A, *Quantitative and Qualitative Disclosures about Market Risk*, of the Company's Annual Report on Form 10-K for the year ended December 31, 2019. During the nine months ended September 30, 2020, there have been no significant changes in our exposure to market risk.

Item 4. ***Controls and Procedures.***

As required by Rule 13a-15 under the Exchange Act, the Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) or Rule 15d-15(e) under the Exchange Act) as of September 30, 2020. Based on that evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of September 30, 2020.

As a matter of practice, the Company's management continues to review and document internal control and procedures for financial reporting. From time to time, the Company may make changes aimed at enhancing the effectiveness of the controls and ensuring that the systems evolve with the business. There were no changes in the Company's internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting during the three months ended September 30, 2020.

PART II. OTHER INFORMATION

Item 1. *Legal Proceedings.*

The information set forth under the heading "Legal Proceedings" in Note 8 – Commitments and Contingencies to the accompanying condensed consolidated financial statements as included in Part I of this Form 10-Q is incorporated herein by reference.

Item 1A. *Risk Factors.*

There have been no material changes in the Company's risk factors as described in Item 1A, *Risk Factors*, of the Company's Annual Report on Form 10-K for the year ended December 31, 2019, except as described below.

The extent to which the COVID-19 pandemic will adversely impact our business, financial condition and operating results is highly uncertain and cannot be predicted but could be material.

The COVID-19 pandemic has created significant worldwide volatility, uncertainty and disruption. In particular, the COVID-19 pandemic and the governmental response to the pandemic has resulted in a substantial curtailment of business activities, a significant number of business closures, slowdowns, suspensions or delays of production and commercial activity, and weakened economic conditions, both in the United States and many foreign countries. As such, the COVID-19 pandemic has directly and indirectly adversely impacted the Company and such adverse impact will likely continue. However, the extent to which the COVID-19 pandemic will ultimately adversely impact the Company's business, financial condition and operating results, which could be material, will depend on numerous evolving factors that are highly uncertain, rapidly changing and cannot be predicted at this time, including:

- the duration and scope of the COVID-19 pandemic;
- governmental, business and individual actions that have been, continue to be and may in the future be taken in response to the COVID-19 pandemic, including business and travel restrictions, "stay-at-home" and "shelter-in-place" directives, quarantines, and slowdowns, suspensions or delays of commercial activity;
- the effect of the COVID-19 pandemic and the government response on our dealers, distributors and other channel partners and customers, including their ability to remain open, continue to sell and service our products, pay for the products purchased from us and obtain vehicle chassis, to the extent that they source such components directly;
- the effect of the COVID-19 pandemic and the governmental response on the budgets of our municipal customers;
- our ability to continue to run our operations as an essential business during the COVID-19 pandemic and/or to maintain our normal production capacity, in light of the potential for adverse impacts associated with decreased labor availability, the temporary suspension of production activity mandated or otherwise made necessary by governmental authorities, weakened demand, supply chain disruptions, or other production delays;
- significant reductions or volatility in demand for one or more of our products or services;
- the effect of the COVID-19 pandemic on our suppliers and our ability to obtain commodities, components and parts, on a timely basis through our supply chain and at previously anticipated costs;
- logistics costs and challenges, including availability of transportation and at previously anticipated costs;
- costs incurred as a result of necessary actions and preparedness plans to help ensure the health and safety of our employees and continued operations, including remote working accommodations, enhanced cleaning processes, protocols designed to implement appropriate social distancing practices, and/or adoption of additional wage and benefit programs to assist employees;
- potential future restructuring, impairment and other charges;
- availability of employees, their ability to conduct work away from normal working locations and/or under revised work environment protocols and the general willingness of employees to come to and perform work;
- the impact of the COVID-19 pandemic on the financial and credit markets and economic activity generally;
- our ability to access lending, capital markets, and other sources of liquidity when needed on reasonable terms or at all;
- our ability to comply with the financial covenants in our debt agreements if a material economic downturn as a result of the COVID-19 pandemic results in substantially increased indebtedness and/or lower earnings; and
- the exacerbation of negative impacts resulting from the occurrence of a global or national recession, depression or other sustained adverse market event as a result of the COVID-19 pandemic.

In addition to its potential to cause a direct adverse affect on our business, operations, financial condition and operating results, the COVID-19 pandemic may also have the effect of heightening many of the other risks described in Item 1A, *Risk Factors*, of the Company's Annual Report on Form 10-K for the year ended December 31, 2019.

Item 2. *Unregistered Sales of Equity Securities and Use of Proceeds.*

The following table provides a summary of the Company's repurchase activity for its common stock during the three months ended September 30, 2020:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs [(a)] [(b)]
July 2020 (6/28/20 – 8/1/20)	7,227	$ 27.71	7,227	$ 90,524,049
August 2020 (8/2/20 – 8/29/20)	—	—	—	90,524,049
September 2020 (8/30/20 – 9/26/20)	—	—	—	90,524,049

(a) On November 4, 2014, the Board authorized a stock repurchase program of up to $75.0 million of the Company's common stock.
(b) On March 13, 2020, the Board authorized an additional stock repurchase program of up to $75.0 million of the Company's common stock. This program supplements the November 2014 stock repurchase program, which remains in effect.

Item 3. *Defaults upon Senior Securities.*

None.

Item 4. *Mine Safety Disclosures.*

Not applicable.

Item 5. *Other Information.*

On October 29, 2020, the Company issued a press release announcing its financial results for the three and nine months ended September 30, 2020. The presentation slides for the third quarter 2020 earnings call were also posted on the Company's website at that time. The full text of the third quarter financial results press release and earnings presentation are attached hereto as Exhibits 99.1 and 99.2, respectively, to this Form 10-Q.

Item 6. ***Exhibits.***

3.1	Restated Certificate of Incorporation of the Company. Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed April 30, 2010.
3.2	Amended and Restated By-laws of the Company. Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed February 9, 2016.
31.1	CEO Certification under Section 302 of the Sarbanes-Oxley Act.
31.2	CFO Certification under Section 302 of the Sarbanes-Oxley Act.
32.1	CEO Certification of Periodic Report under Section 906 of the Sarbanes-Oxley Act.
32.2	CFO Certification of Periodic Report under Section 906 of the Sarbanes-Oxley Act.
99.1	Third Quarter Financial Results Press Release, Dated October 29, 2020.
99.2	Third Quarter Earnings Call Presentation Slides.
101.INS	XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document).
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Calculation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Inline XBRL Taxonomy Label Linkbase Document.
101.PRE	Inline XBRL Taxonomy Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101).

SIGNATURE

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

	Federal Signal Corporation
Date: October 29, 2020	/s/ Ian A. Hudson
	Ian A. Hudson
	Senior Vice President and Chief Financial Officer
	(Principal Financial Officer)

EXHIBIT 99.1

1415 West 22nd Street
Oak Brook, Illinois 60523
630.954.2000
federalsignal.com

FOR IMMEDIATE RELEASE

Federal Signal Raises Full-Year Outlook after Reporting Strong Third Quarter Results

Oak Brook, Illinois, October 29, 2020 — Federal Signal Corporation (NYSE:FSS) (the "Company"), a leader in environmental and safety solutions, today reported results for the third quarter ended September 30, 2020.

Third Quarter Highlights

- Net sales of $280 million
- Operating margin of 12.2%, compared to 12.5% last year
- Adjusted EBITDA margin of 16.4%, exceeding high end of target range, and up from 16.1% last year
- GAAP EPS of $0.41
- Adjusted EPS of $0.42
- Orders of $266 million, up $65 million, or 32%, compared to the second quarter of 2020
- Year-to-date operating cash generation of $80 million, up $21 million, or 36%, from last year
- $66 million of cash and $251 million of credit facility availability at end of quarter
- Raising full-year adjusted EPS* outlook to a new range of $1.58 to $1.66, from the previous range of $1.53 to $1.65

Consolidated net sales for the third quarter were $280 million, compared to $309 million in the same quarter a year ago. Net income for the third quarter was $25.3 million, equal to $0.41 per diluted share, compared to $28.4 million, equal to $0.46 per share, in the prior-year quarter.

The Company also reported adjusted net income for the third quarter of $25.9 million, equal to $0.42 per diluted share, compared to $28.9 million, or $0.47 per diluted share, in the third quarter of last year. The Company is reporting adjusted results to facilitate comparisons of underlying performance on a year-over-year basis. A reconciliation of these and other non-GAAP measures is provided at the conclusion of this news release.

Impressive Operational Performance Despite Ongoing Disruptions; Margin Again Exceeds Target Range, and Order Trends Improve Sequentially

"Our operating results were in line with the high expectations we had for the quarter, with seasonally-strong performance at many of our businesses. Our teams continue to demonstrate excellent operational execution in challenging circumstances, while prioritizing the safety of our employees," commented Jennifer L. Sherman, President and Chief Executive Officer. "Once again, we delivered margin performance above the upper end of our target range, achieving an adjusted EBITDA margin of 16.4%. In addition, our third quarter order intake was up $65 million, or 32%, compared to the second quarter, further evidencing our strong business fundamentals, broad range of product offerings, and diversity in our end markets."

In the Environmental Solutions Group, net sales for the third quarter were $231 million, compared to $254 million in the prior-year quarter. In the Safety and Security Systems Group, net sales were $49 million, compared to $55 million last year.

Consolidated operating income for the third quarter was $34.0 million, compared to $38.6 million in the prior-year quarter. Consolidated operating margin was 12.2%, compared to 12.5% in the prior-year quarter.

Consolidated adjusted earnings before interest, tax, depreciation and amortization ("adjusted EBITDA") for the third quarter was $45.9 million, compared to $49.8 million in the prior-year quarter, and consolidated adjusted EBITDA margin improved to 16.4%, compared to 16.1% last year.

Adjusted EBITDA in the Environmental Solutions Group was $43.9 million, compared to $46.0 million in the prior-year quarter, and its adjusted EBITDA margin was 19.0%, up from 18.1% last year. In the Safety and Security Systems Group, adjusted EBITDA was $8.2 million, compared to $9.4 million in the prior-year quarter, and its adjusted EBITDA margin was 16.8%, compared to 17.2% last year.

Consolidated backlog at September 30, 2020 was $320 million, compared to $367 million in the prior-year quarter.

Financial Position Remains Strong, Providing Flexibility to Fund Growth Opportunities and Cash Returns to Stockholders

Net cash of $15 million was provided by operating activities during the third quarter, bringing the total cash generated from operations so far this year to $80 million, an improvement of $21 million, or 36%, compared to the prior-year period.

At September 30, 2020, consolidated debt was $239 million, total cash and cash equivalents were $66 million and the Company had $251 million of availability for borrowings under its five-year revolving credit facility, which was executed in July 2019.

“Our financial position continues to be very strong,” said Sherman. “It provides us with flexibility to pursue strategic acquisitions, invest in organic growth initiatives, and fund cash returns to stockholders.”

The Company funded dividends of $4.8 million during the third quarter, reflecting a dividend of $0.08 per share, and the Board of Directors recently declared a similar dividend that will be payable in the fourth quarter. In addition, the Company repurchased $0.2 million of stock in the third quarter under its existing share repurchase program.

Outlook

“Our track record of solid execution during these challenging times and the continued strength of our backlog provide us with confidence in the year,” noted Sherman. “As a result, we are raising our 2020 adjusted EPS* outlook to a new range of $1.58 to $1.66, from a range of $1.53 to $1.65. The new range would represent the second highest adjusted EPS* in our history, surpassed only by the record set last year.”

CONFERENCE CALL

Federal Signal will host its third quarter conference call on Thursday, October 29, 2020 at 10:00 a.m. Eastern Time. The call will last approximately one hour. The call may be accessed over the internet through Federal Signal’s website at www.federalsignal.com or by dialing phone number 1-877-705-6003 and entering the pin number 13712051. A replay will be available on Federal Signal’s website shortly after the call.

About Federal Signal

Federal Signal Corporation (NYSE: FSS) builds and delivers equipment of unmatched quality that moves material, cleans infrastructure, and protects the communities where we work and live. Founded in 1901, Federal Signal is a leading global designer, manufacturer and supplier of products and total solutions that serve municipal, governmental, industrial and commercial customers. Headquartered in Oak Brook, Ill., with manufacturing facilities worldwide, the Company operates two groups: Environmental Solutions and Safety and Security Systems. For more information on Federal Signal, visit: www.federalsignal.com.

“Safe Harbor” Statement under the Private Securities Litigation Reform Act of 1995

This release contains unaudited financial information and various forward-looking statements as of the date hereof and we undertake no obligation to update these forward-looking statements regardless of new developments or otherwise. Statements in this release that are not historical are forward-looking statements. Such statements are subject to various risks and uncertainties that could cause actual results to vary materially from those stated. Such risks and uncertainties include but are not limited to: direct and indirect impacts of the coronavirus pandemic and the associated government response, economic conditions in various regions, product and price competition, supply chain disruptions, work stoppages, availability and pricing of raw materials, risks associated with acquisitions such as integration of operations and achieving anticipated revenue and cost benefits, foreign currency exchange rate changes, interest rate changes, increased legal expenses and litigation results, legal and regulatory developments and other risks and uncertainties described in filings with the Securities and Exchange Commission.

Contact: Ian Hudson, Chief Financial Officer, +1-630-954-2000, ihudson@federalsignal.com

* Adjusted earnings per share (“EPS”) is a non-GAAP measure, which includes certain adjustments to reported GAAP net income and diluted EPS. When reporting adjusted EPS in 2020, we have made, and would expect to continue to make, certain adjustments to exclude the impact of acquisition and integration-related expenses, pension-related charges, restructuring activity, coronavirus-related expenses and purchase accounting effects, where applicable. In prior years, we have also made adjustments to GAAP net income and diluted EPS for hearing loss settlement charges and special tax items. Should any similar items occur in 2020, we would also expect to exclude them from the determination of adjusted EPS. However, because of the underlying uncertainty in quantifying amounts which may not yet be known, a reconciliation of our Adjusted EPS outlook to the most applicable GAAP measure is excluded based on the unreasonable efforts exception in Item 10(e)(1)(i)(B).

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)

(in millions, except per share data)	Three Months Ended September 30, 2020	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2020	Nine Months Ended September 30, 2019
Net sales	$ 279.8	$ 308.8	$ 836.0	$ 906.9
Cost of sales	207.2	226.8	618.3	665.6
Gross profit	72.6	82.0	217.7	241.3
Selling, engineering, general and administrative expenses	38.4	43.0	118.0	128.7
Acquisition and integration-related expenses	0.2	0.4	0.8	1.9
Restructuring	—	—	1.3	—
Operating income	34.0	38.6	97.6	110.7
Interest expense	1.2	2.1	4.5	6.1
Other (income) expense, net	(0.1)	0.2	2.1	0.5
Income before income taxes	32.9	36.3	91.0	104.1
Income tax expense	7.6	7.9	20.9	25.4
Net income	$ 25.3	$ 28.4	$ 70.1	$ 78.7
Earnings per share:				
Basic	$ 0.42	$ 0.47	$ 1.16	$ 1.31
Diluted	$ 0.41	$ 0.46	$ 1.14	$ 1.28
Weighted average common shares outstanding:				
Basic	60.3	60.2	60.3	60.1
Diluted	61.3	61.4	61.5	61.3
Cash dividends declared per common share	$ 0.08	$ 0.08	$ 0.24	$ 0.24
Operating data:				
Operating margin	12.2 %	12.5 %	11.7 %	12.2 %
Adjusted EBITDA	$ 45.9	$ 49.8	$ 135.2	$ 142.8
Adjusted EBITDA margin	16.4 %	16.1 %	16.2 %	15.7 %
Total orders	$ 265.8	$ 328.8	$ 771.0	$ 935.8
Backlog	319.7	366.9	319.7	366.9
Depreciation and amortization	11.2	10.8	33.1	30.1

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS

(in millions, except per share data)	September 30, 2020 (Unaudited)	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 66.2	$ 31.6
Accounts receivable, net of allowances for doubtful accounts of $3.0 and $2.4, respectively	145.0	134.2
Inventories	196.6	182.9
Prepaid expenses and other current assets	9.9	12.0
Total current assets	417.7	360.7
Properties and equipment, net of accumulated depreciation of $133.0 and $125.5, respectively	105.6	91.9
Rental equipment, net of accumulated depreciation of $40.9 and $33.6, respectively	115.4	115.4
Operating lease right-of-use assets	22.4	27.6
Goodwill	392.0	388.8
Intangible assets, net of accumulated amortization of $29.4 and $22.1, respectively	155.4	162.9
Deferred tax assets	7.7	10.0
Deferred charges and other long-term assets	8.2	7.9
Long-term assets of discontinued operations	0.3	0.3
Total assets	$ 1,224.7	$ 1,165.5
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term borrowings and finance lease obligations	$ 0.2	$ 0.2
Accounts payable	71.1	65.0
Customer deposits	11.5	11.5
Accrued liabilities:		
Compensation and withholding taxes	27.8	31.1
Current operating lease liabilities	8.1	8.2
Other current liabilities	39.7	44.0
Current liabilities of discontinued operations	0.2	0.2
Total current liabilities	158.6	160.2
Long-term borrowings and finance lease obligations	238.7	220.3
Long-term operating lease liabilities	16.2	21.6
Long-term pension and other postretirement benefit liabilities	44.6	50.9
Deferred tax liabilities	58.1	52.7
Other long-term liabilities	27.8	17.3
Long-term liabilities of discontinued operations	0.9	0.9
Total liabilities	544.9	523.9
Stockholders' equity:		
Common stock, $1 par value per share, 90.0 shares authorized, 67.8 and 66.9 shares issued, respectively	67.8	66.9
Capital in excess of par value	237.4	228.6
Retained earnings	583.8	528.2
Treasury stock, at cost, 7.3 and 6.4 shares, respectively	(119.3)	(93.0)
Accumulated other comprehensive loss	(89.9)	(89.1)
Total stockholders' equity	679.8	641.6
Total liabilities and stockholders' equity	$ 1,224.7	$ 1,165.5

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)

(in millions)	Nine Months Ended September 30, 2020	Nine Months Ended September 30, 2019
Operating activities:		
Net income	$ 70.1	$ 78.7
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	33.1	30.1
Stock-based compensation expense	5.4	5.9
Payments for acquisition-related activity	—	(3.1)
Deferred income taxes	8.4	8.6
Changes in operating assets and liabilities	(37.4)	(61.6)
Net cash provided by operating activities	79.6	58.6
Investing activities:		
Purchases of properties and equipment	(24.3)	(21.2)
Proceeds from sales of properties and equipment	0.5	0.3
Payments for acquisition-related activity	(6.2)	(49.6)
Proceeds from acquisition-related activity	0.8	—
Other, net	—	0.2
Net cash used for investing activities	(29.2)	(70.3)
Financing activities:		
Increase in revolving lines of credit, net	20.5	37.5
Payments of debt financing fees	—	(1.0)
Purchases of treasury stock	(13.7)	(1.0)
Redemptions of common stock to satisfy withholding taxes related to stock-based compensation	(9.0)	(1.9)
Payments for acquisition-related activity	—	(10.3)
Cash dividends paid to stockholders	(14.5)	(14.5)
Proceeds from stock-based compensation activity	0.6	1.7
Other, net	0.1	—
Net cash (used for) provided by financing activities	(16.0)	10.5
Effects of foreign exchange rate changes on cash and cash equivalents	0.2	(0.3)
Increase (decrease) in cash and cash equivalents	34.6	(1.5)
Cash and cash equivalents at beginning of year	31.6	37.4
Cash and cash equivalents at end of period	$ 66.2	$ 35.9

FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

GROUP RESULTS (Unaudited)

The following tables summarize group operating results as of and for the three and nine months ended September 30, 2020 and 2019:

Environmental Solutions Group

	Three Months Ended September 30,			Nine months ended September 30, 2020		
($ in millions)	2020	2019	Change	2020	2019	Change
Net sales	$ 231.0	$ 254.0	$ (23.0)	$ 678.2	$ 740.7	$ (62.5)
Operating income	33.0	35.9	(2.9)	91.0	106.4	(15.4)
Adjusted EBITDA	43.9	46.0	(2.1)	124.8	135.1	(10.3)
Operating data:						
Operating margin	14.3 %	14.1 %	0.2 %	13.4 %	14.4 %	(1.0)%
Adjusted EBITDA margin	19.0 %	18.1 %	0.9 %	18.4 %	18.2 %	0.2 %
Total orders	$ 220.0	$ 270.2	$ (50.2)	$ 615.2	$ 767.1	$ (151.9)
Backlog	292.6	337.8	(45.2)	292.6	337.8	(45.2)
Depreciation and amortization	10.4	10.0	0.4	30.6	27.5	3.1

Safety and Security Systems Group

	Three Months Ended September 30,			Nine months ended September 30, 2020		
($ in millions)	2020	2019	Change	2020	2019	Change
Net sales	$ 48.8	$ 54.8	$ (6.0)	$ 157.8	$ 166.2	$ (8.4)
Operating income	7.4	8.6	(1.2)	25.2	26.8	(1.6)
Adjusted EBITDA	8.2	9.4	(1.2)	28.1	29.3	(1.2)
Operating data:						
Operating margin	15.2 %	15.7 %	(0.5)%	16.0 %	16.1 %	(0.1)%
Adjusted EBITDA margin	16.8 %	17.2 %	(0.4)%	17.8 %	17.6 %	0.2 %
Total orders	$ 45.8	$ 58.6	$ (12.8)	$ 155.8	$ 168.7	$ (12.9)
Backlog	27.1	29.1	(2.0)	27.1	29.1	(2.0)
Depreciation and amortization	0.8	0.8	—	2.5	2.5	—

Corporate Expenses

Corporate operating expenses were $6.4 million and $5.9 million for the three months ended September 30, 2020 and 2019, respectively. For the nine months ended September 30, 2020 and 2019, corporate operating expenses were $18.6 million and $22.5 million, respectively.

SEC REGULATION G NON-GAAP RECONCILIATION

The financial measures presented below are unaudited and are not in accordance with U.S. generally accepted accounting principles ("GAAP"). The non-GAAP financial information presented herein should be considered supplemental to, and not a substitute for, or superior to, financial measures calculated in accordance with GAAP. The Company has provided this supplemental information to investors, analysts, and other interested parties to enable them to perform additional analyses of operating results, to illustrate the results of operations giving effect to the non-GAAP adjustments shown in the reconciliations below, and to provide an additional measure of performance which management considers in operating the business.

Adjusted Net Income and Earnings Per Share ("EPS"):

The Company believes that modifying its 2020 and 2019 net income and diluted EPS provides additional measures which are representative of the Company's underlying performance and improves the comparability of results across reporting periods. During the three and nine months ended September 30, 2020 and 2019 adjustments were made to reported GAAP net income and diluted EPS to exclude the impact of acquisition and integration-related expenses, pension-related charges, restructuring activity, coronavirus-related expenses and purchase accounting effects, where applicable.

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in millions)	**2020**	**2019**	**2020**	**2019**
Net income	$ 25.3	$ 28.4	$ 70.1	$ 78.7
Add:				
Income tax expense	7.6	7.9	20.9	25.4
Income before income taxes	32.9	36.3	91.0	104.1
Add:				
Acquisition and integration-related expenses	0.2	0.4	0.8	1.9
Pension-related charges [(a)]	—	—	2.5	—
Restructuring	—	—	1.3	—
Coronavirus-related expenses [(b)]	0.4	—	2.2	—
Purchase accounting effects [(c)]	0.2	0.2	0.5	0.5
Adjusted income before income taxes	33.7	36.9	98.3	106.5
Adjusted income tax expense [(d)]	(7.8)	(8.0)	(22.5)	(25.9)
Adjusted net income	$ 25.9	$ 28.9	$ 75.8	$ 80.6

	Three Months Ended September 30,		Nine Months Ended September 30,	
(dollars per diluted share)	**2020**	**2019**	**2020**	**2019**
EPS	$ 0.41	$ 0.46	$ 1.14	$ 1.28
Add:				
Income tax expense	0.13	0.13	0.34	0.41
Income before income taxes	0.54	0.59	1.48	1.69
Add:				
Acquisition and integration-related expenses	0.00	0.01	0.01	0.03
Pension-related charges [(a)]	—	—	0.04	—
Restructuring	—	—	0.02	—
Coronavirus-related expenses [(b)]	0.01	—	0.04	—
Purchase accounting effects [(c)]	0.00	0.00	0.01	0.01
Adjusted income before income taxes	0.55	0.60	1.60	1.73
Adjusted income tax expense [(d)]	(0.13)	(0.13)	(0.37)	(0.42)
Adjusted EPS	$ 0.42	$ 0.47	$ 1.23	$ 1.31

(a) Pension-related charges in the nine months ended September 30, 2020 relate to charges incurred in connection with the withdrawal from a multi-employer pension plan. Such charges are included as a component of Other (income) expense, net on the Condensed Consolidated Statement of Operations.

(b) Coronavirus-related expenses in the three and nine months ended September 30, 2020 include direct expenses incurred as a result of the coronavirus pandemic, that are incremental to, and separable from, normal operations. Such expenses primarily relate to incremental paid time off provided to employees and costs incurred to implement enhanced workplace safety protocols.

(c) Purchase accounting effects relate to adjustments to exclude the step-up in the valuation of acquired JJE equipment that was sold subsequent to the acquisition in the three and nine months ended September 30, 2020 and 2019, as well as to exclude the depreciation of the step-up in the valuation of the rental fleet acquired.

(d) Adjusted income tax expense for the three and nine months ended September 30, 2020 and 2019 was recomputed after excluding the impact of acquisition and integration-related expenses, pension-related charges, restructuring activity, coronavirus-related expenses and purchase accounting effects, where applicable.

Adjusted EBITDA and Adjusted EBITDA Margin:

The Company uses adjusted EBITDA and the ratio of adjusted EBITDA to net sales ("adjusted EBITDA margin"), at both the consolidated and segment level, as additional measures which are representative of its underlying performance and to improve the comparability of results across reporting periods. We believe that investors use versions of these metrics in a similar manner. For these reasons, the Company believes that adjusted EBITDA and adjusted EBITDA margin, at both the consolidated and segment level, are meaningful metrics to investors in evaluating the Company's underlying financial performance.

Consolidated adjusted EBITDA is a non-GAAP measure that represents the total of net income, interest expense, acquisition and integration-related expenses, restructuring activity, coronavirus-related expenses, purchase accounting effects, other income/expense, income tax expense, and depreciation and amortization expense. Consolidated adjusted EBITDA margin is a non-GAAP measure that represents the total of net income, interest expense, acquisition and integration-related expenses, restructuring activity, coronavirus-related expenses, purchase accounting effects, other income/expense, income tax expense, and depreciation and amortization expense divided by net sales for the applicable period(s).

Segment adjusted EBITDA is a non-GAAP measure that represents the total of segment operating income, acquisition and integration-related expenses, restructuring activity, coronavirus-related expenses, purchase accounting effects and depreciation and amortization expense, as applicable. Segment adjusted EBITDA margin is a non-GAAP measure that represents the total of segment operating income, acquisition and integration-related expenses, restructuring activity, coronavirus-related expenses, purchase accounting effects and depreciation and amortization expense, as applicable, divided by net sales for the applicable period(s). Segment operating income includes all revenues, costs and expenses directly related to the segment involved. In determining segment income, neither corporate nor interest expenses are included. Segment depreciation and amortization expense relates to those assets, both tangible and intangible, that are utilized by the respective segment.

Other companies may use different methods to calculate adjusted EBITDA and adjusted EBITDA margin.

Consolidated

The following table summarizes the Company's consolidated adjusted EBITDA and adjusted EBITDA margin and reconciles net income to consolidated adjusted EBITDA for the three and nine months ended September 30, 2020 and 2019:

	Three Months Ended September 30,		Nine Months Ended September 30,	
($ in millions)	**2020**	**2019**	**2020**	**2019**
Net income	$ 25.3	$ 28.4	$ 70.1	$ 78.7
Add:				
Interest expense	1.2	2.1	4.5	6.1
Acquisition and integration-related expenses	0.2	0.4	0.8	1.9
Restructuring	—	—	1.3	—
Coronavirus-related expenses	0.4	—	2.2	—
Purchase accounting effects*	0.1	0.0	0.2	0.1
Other (income) expense, net	(0.1)	0.2	2.1	0.5
Income tax expense	7.6	7.9	20.9	25.4
Depreciation and amortization	11.2	10.8	33.1	30.1
Consolidated adjusted EBITDA	$ 45.9	$ 49.8	$ 135.2	$ 142.8
Net sales	$ 279.8	$ 308.8	$ 836.0	$ 906.9
Consolidated adjusted EBITDA margin	16.4 %	16.1 %	16.2 %	15.7 %

** Excludes purchase accounting expenses reflected in depreciation and amortization of $0.1 million and $0.2 million for the three months ended September 30, 2020 and 2019, respectively, and $0.3 million and $0.4 million for the nine months ended September 30, 2020 and 2019, respectively.*

Environmental Solutions Group

The following table summarizes the Environmental Solutions Group's adjusted EBITDA and adjusted EBITDA margin and reconciles operating income to adjusted EBITDA for the three and nine months ended September 30, 2020 and 2019:

	Three Months Ended September 30,		Nine Months Ended September 30,	
($ in millions)	**2020**	**2019**	**2020**	**2019**
Operating income	$ 33.0	$ 35.9	$ 91.0	$ 106.4
Add:				
Acquisition and integration-related expenses	0.1	0.1	0.3	1.1
Restructuring	—	—	0.7	—
Coronavirus-related expenses	0.3	—	2.0	—
Purchase accounting effects*	0.1	0.0	0.2	0.1
Depreciation and amortization	10.4	10.0	30.6	27.5
Adjusted EBITDA	$ 43.9	$ 46.0	$ 124.8	$ 135.1
Net sales	$ 231.0	$ 254.0	$ 678.2	$ 740.7
Adjusted EBITDA margin	19.0 %	18.1 %	18.4 %	18.2 %

** Excludes purchase accounting expenses reflected in depreciation and amortization of $0.1 million and $0.2 million for the three months ended September 30, 2020 and 2019, respectively, and $0.3 million and $0.4 million for the nine months ended September 30, 2020 and 2019, respectively.*

Safety and Security Systems Group

The following table summarizes the Safety and Security Systems Group's adjusted EBITDA and adjusted EBITDA margin and reconciles operating income to adjusted EBITDA for the three and nine months ended September 30, 2020 and 2019:

	Three Months Ended September 30,		Nine Months Ended September 30,	
($ in millions)	**2020**	**2019**	**2020**	**2019**
Operating income	$ 7.4	$ 8.6	$ 25.2	$ 26.8
Add:				
Restructuring	—	—	0.3	—
Coronavirus-related expenses	—	—	0.1	—
Depreciation and amortization	0.8	0.8	2.5	2.5
Adjusted EBITDA	$ 8.2	$ 9.4	$ 28.1	$ 29.3
Net sales	$ 48.8	$ 54.8	$ 157.8	$ 166.2
Adjusted EBITDA margin	16.8 %	17.2 %	17.8 %	17.6 %