

**Environmental Products Group**



**Tool Group**

**Fire Rescue Group**



**Safety Products Group**

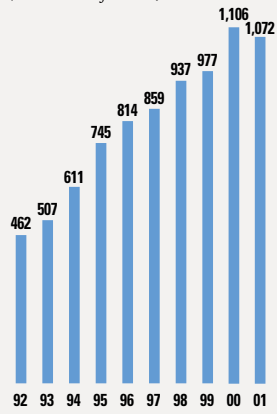
**Committed to  
Shareholder Value**

## Financial Highlights

Federal Signal Corporation and Subsidiaries

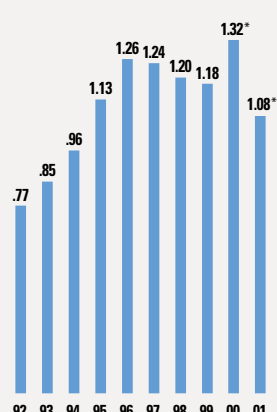
### Net Sales

(in millions of dollars)



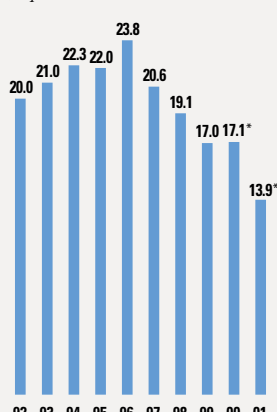
### Income per Share

(continuing operations)



### Return on Equity

(in percent)



For the years ended December 31,

### Operations

	2001	2000	Change
Net sales	\$ 1,072,175,000	\$ 1,106,127,000	(3)%
Operating income before restructuring charges	\$ 95,631,000	\$ 120,398,000	(21)%
Restructuring charges	\$ (3,627,000)	\$ (3,744,000)	
Operating income	\$ 92,004,000	\$ 116,654,000	(21)%
Income from continuing operations	\$ 46,590,000	\$ 57,655,000	(19)%
Pro-forma income from continuing operations, excluding restructuring charges	\$ 48,866,000	\$ 59,976,000	(19)%
Per share data:			
Income from continuing operations	\$ 1.03	\$ 1.27	(19)%
Income from discontinued operations, net of taxes	\$ .02	\$ .02	
Cumulative effect of change in accounting	\$	\$ (.02)	
Net income - diluted <sup>(1)</sup>	\$ 1.05	\$ 1.26	(17)%
Cash dividends paid	\$ .78	\$ .76	3%
Operating margin <sup>(2)</sup>	8.9%	10.9%	
Return on average common shareholders' equity <sup>(2)</sup>	13.9%	17.1%	
Cash flow from operations	\$ 95,113,000	\$ 64,390,000	
Capital expenditures	\$ 18,424,000	\$ 22,288,000	
Average common shares outstanding	45,443,000	45,521,000	

### Financial Position at Year-End

Shares outstanding	45,129,000	45,304,000
Working capital <sup>(3)</sup>	\$ 162,895,000	\$ 60,016,000
Current ratio <sup>(3)</sup>	1.9	1.2
Debt-to-capitalization ratio <sup>(3)</sup>	44%	45%
Shareholders' equity	\$ 359,436,000	\$ 357,431,000
Book value per share	\$ 7.96	\$ 7.89

<sup>(1)</sup> amounts may not add due to rounding

<sup>(2)</sup> before restructuring charges

<sup>(3)</sup> manufacturing operations only

\*excluding restructuring charges of \$.05 per share (2000 and 2001)

## SAFETY PRODUCTS GROUP



**Stephen C. Buck** Group President

### Lines of Business

Warning, signaling, hazardous area lighting and communications products	Parking revenue and access control systems	Containment products for storage and use of hazardous material
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### Market Segments

Industry, municipalities, automotive and truck, oil and gas, marine, mining	Airports, municipalities, institutions, parking operators, contractors, roadway authorities	Industry, laboratories, institutions, government
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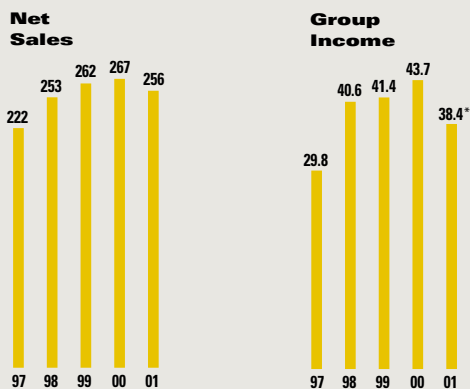
### Representative Brands

Akusta, Federal Signal, Millbank, NRL, Pauluhn, Target Tech, VAMA, Victor	Federal APD	Justrite
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### Primary Manufacturing Locations

Anaheim, CA Danville, KY Pearland, TX University Park, IL Barcelona, Spain Edmonton, Alberta Macclesfield, England Newcastle, England Johannesburg, South Africa	Novi, MI Sao Paulo, Brazil	Mattoon, IL
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### Net Sales/Group Income (in millions of dollars)



\*excluding restructuring charges of \$.5 (2001)

## TOOL GROUP



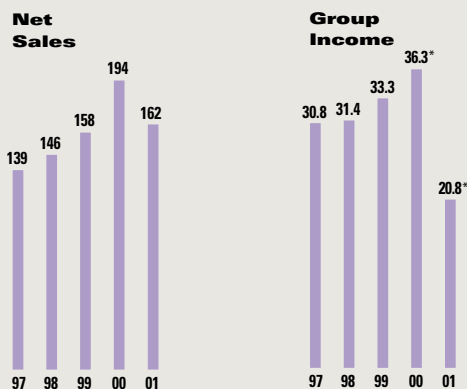
**Alan G. Ringler** Group President

Standard and special die components and precision parts	Carbide cutoff, grooving and threading tool systems, superhard inserts, indexable insert drills and milling tools	Mold bases and mold tooling components
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Die builders, automotive, appliance, can making	Automotive, automotive suppliers, bearings, agriculture/construction equipment, aerospace	Plastic injection mold builders, electronics, automotive, medical, building
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Dayton Progress	Clapp Dico Manchester Tools OTM	P.C.S. Company
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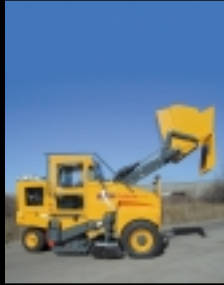
Dayton, OH Jamestown, NY Minneapolis, MN Portland, IN Frankfurt, Germany Meaux, France Tokyo, Japan Warwickshire, England Woodbridge, Ontario	Akron, OH Wapakoneta, OH Whitehouse, OH	Fraser, MI
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\*excluding restructuring charges of \$1.0 (2000), \$1.5 (2001)



## ENVIRONMENTAL PRODUCTS GROUP



**Shawn V. Casey** Group President

Air and mechanical sweepers for roadways, parking areas and industrial facilities

Sewer and catch basin cleaners, industrial vacuum loaders, glycol recovery vehicles, hydroexcavation vehicles, closed-loop surface cleaning systems

High pressure water blasting systems, parts and accessories

Municipalities, contractors, airports, industry

Municipalities, contractors, airports, industry

Environmental contractors, industry, shipyards

Atthey/Mobil  
Elgin  
Ravo

Guzzler  
Vactor

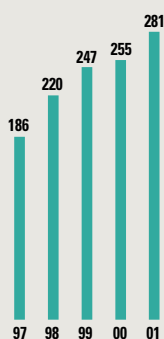
Jetstream

Elgin, IL  
Youngsville, NC  
Alkmaar, Netherlands

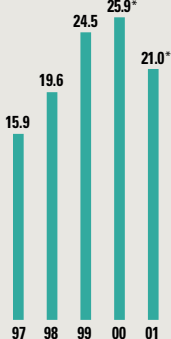
Streator, IL

Houston, TX

**Net Sales**



**Group Income**



\*excluding restructuring charges of \$2.8 (2000), \$.8 (2001)

## FIRE RESCUE GROUP



**Harold C. Pinto** Group President

Aluminum, steel and glassfiber reinforced polyester fire apparatus and emergency medical rescue and transport vehicles

Vehicle-mounted aerial access platforms

Airport rescue vehicles and industrial fire equipment

Municipalities, industry, military, airport fire protection, emergency medical service (EMS)

Municipalities, industry, airport fire protection, industrial contractors, utilities

Municipalities, industry, military, airport fire protection

Emergency One  
Plastisol  
Saulsbury  
Superior

Bronto

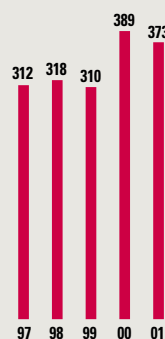
Emergency One  
Plastisol

Ocala, FL  
Preble, NY  
Red Deer, Alberta  
Wanroij, Netherlands

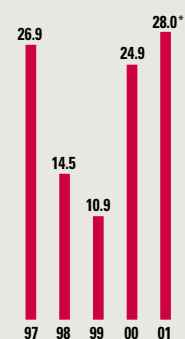
Tampere, Finland

Ocala, FL  
Stellendam, Netherlands  
Wanroij, Netherlands

**Net Sales**



**Group Income**



\*excluding restructuring charges of \$.9 (2001)

## To Our Shareholders and Employees



From left:

Andrew E. Graves, President and Chief Operating Officer

Joseph J. Ross, Chairman and Chief Executive Officer

The severe manufacturing recession this past year certainly took its toll on Federal Signal Corporation. With full year's sales down 3%, we experienced our first decline in sales in 36 years. Earnings from continuing operations fared much worse, as we fell from \$1.27 to \$1.03. On a positive note, we believe the market diversity we target, represented by our mix of municipal and industrial businesses, allowed us to perform better this past year than most industrial-focused companies. As is often the case, we had a mixture of successes and disappointments this past year.

**We had some successes...** We are extremely pleased that we were able to increase our cash flow from operations nearly 50% over both 2000 and the average of the past five years. We placed a great deal of focus on improving processes within the company in order to yield higher levels of cash flow, not only in 2001, but in future years as well.

We strengthened most of our market leading positions, mainly by the introduction of several new products.

We increased the resources devoted to our corporate-wide strategic purchasing initiative during this past year. Partly as a result of that initiative, we not only avoided the effect of inflation on our non-employee costs for the year, but we also were able to obtain a net reduction of one to two percent.

We continued to invest in our future growth as our spending on new products increased over 2000's record levels.

As a company dealing significantly in fire and other emergency products, our employees responded quickly to the events of September 11<sup>th</sup>, and many of our employees went "beyond the call" to provide immediate assistance. Some of that assistance is described at the end of this letter.

**We also had some disappointments...** As we mentioned, our earnings per share from continuing operations were down significantly, \$1.03 versus the previous year's \$1.27. This was our worst year-over-year earnings performance since 1983. While our municipal markets remained healthy overall during the year, we encountered significant delays in order patterns in our Fire Rescue Group and in the parking equipment segment of our Safety Products Group in the latter half of the year. As a result, we were unable to offset the severe decline in our U.S. industrial and

commercial businesses. Our diversified strategy helped our results in 2001, but not enough to avoid an earnings decline from our record 2000 results.

Last year at this time, we recognized we had very weak industrial markets in the U.S. but, in line with the consensus thinking at the time, we anticipated improvement in the latter half of the year. Throughout the year we worked to adjust our employment levels to our demand levels through normal attrition and voluntary time off. With the U.S. manufacturing recession deepening in the back half of 2001 we were unable to meet our own earnings estimates; our municipal businesses cushioned the industrial downturn but could not completely offset it. We also could not reach the appropriate levels of employment through our voluntary measures and we found it necessary to reduce employment by nearly three percent in the latter half of the year. We took a restructuring charge of five cents in the fourth quarter, mostly related to these reductions in employment.

We continued to market our Sign Group, presently carried as a discontinued operation, throughout the year. With a combination of a downturn in demand in that business and a tightening of the money supply for acquisitions such as this, we did not accomplish a sale. Federal Sign performed well in difficult market conditions, earning \$1.7 million of operating income and generating positive cash flow. We will continue to market this business for strategic reasons, but we will only accept a valuation that reflects what Federal Sign can earn in a more normal economic environment.

**We invested in our future growth...** We made three small, but strategic, acquisitions this past year. We added a new cutting tool product line to our Tool Group. We also acquired the assets of Athey Products Company for our Environmental Products Group and significantly increased our presence in the U.S. four-wheel mechanical street sweeper market. Lastly, early in the fourth quarter, we acquired a majority interest in Plastisol Holdings B.V., a Netherlands-based manufacturer of glassfiber reinforced polyester cabs and bodies for fire apparatus. This technology complements our Fire Rescue Group's expertise in aluminum and steel. Plastisol provides us with a significant opportunity to grow our non-U.S. sales of fire rescue products, as well as provide the possibility of future U.S. product applications.

As a company, we increased our investments in Europe in order to accelerate our future growth in that marketplace. In our Tool Group, we began construction of a manufacturing facility in Portugal, which should be in operation in the middle of 2002 to serve the European marketplace. While we anticipate some benefit in 2002,

this facility will represent a significant cost reduction for the group as production increases going forward. We expect to increase both the profitability and the growth potential of our European tool operations. In addition to Fire Rescue Group's investment in Plastisol Holdings noted above, we also established another operation in the Netherlands to assemble complete fire fighting vehicles for airport applications. Lastly, our Safety Products Group increased its presence in Europe by opening sales and warehousing operations in Belgium to sell and distribute multiple product lines throughout Europe.

During the year, we began investing in a corporate-wide lean enterprise initiative. While our businesses have always focused on performance improvements, this is our first coordinated corporate-wide effort. As we discussed priorities when Andy Graves joined us in early 2001, we both felt his strength in this area could help drive our businesses to higher levels of operating performance. There is a great deal of focus throughout the company on raising asset productivity, eliminating waste and improving quality. We anticipate improved customer satisfaction as well as significant, ongoing improvements in our operating margins.

Our total spending on research and development to support future new products was in the range of \$20 million, up from the record spending we saw in 2000. These are key investments to ensure the future of our company.

While our company is, and will remain, a diversified enterprise, we do have certain common success factors among our various businesses. These factors center around new product development, lean enterprise execution and, most importantly, continual training and development of all of our employees. Each of our group narratives on pages 12 through 27 address these key success factors.

**We had some management changes...** Walden (Wally) O'Dell, Chairman, President and Chief Executive Officer of Diebold, Inc. joined our Board of Directors in July 2001. After many successful years with Emerson Electric in various operating roles, Wally joined Diebold in late 1999. His extensive global operating experience will make a significant addition to our Board of Directors.

Henry L. Dykema, our Vice President and Chief Financial Officer, retired in the beginning of 2002 and we thank Henry for his many contributions. In February of this year, we elected Stephanie Kushner as our new Vice President and Chief Financial Officer. Stephanie brings with her an extensive financial background at both Amoco Corporation and FMC Corporation and we look forward to her contributions.

**We are optimistic entering 2002...** We were optimistic entering 2001, but most of that was based on the expectation of a late 2001 recovery in the U.S. manufacturing environment. What's different this year? Our plans for 2002 assume little, if any, recovery. We believe we will encounter flat industrial/commercial markets and slow-growth municipal markets. Yet we are confident that we will be able to substantially improve our earnings performance.

What will drive that earnings performance? The restructuring charge we took in the fourth quarter will provide benefits to us in 2002, as we expect a payback within the first six months. Also, we are confident that our lean enterprise initiative will begin bearing fruit this coming year. Further, while we are very aware that many governmental entities in the U.S. are struggling with their funding and budgets, we still believe that our product offering will retain a high priority among those budgets, especially our products related to fire and emergency services. Our restructuring has helped align our costs with our market opportunities in our industrial businesses; as a result, we believe that the relative strength of our municipal markets in 2002 will help overcome weak industrial markets and drive the earnings growth we anticipate.

Looking beyond 2002, we believe our company is positioned for strong earnings growth. As the manufacturing economy moves out of recession, our Tool Group will return to solid sales growth; that growth will further improve

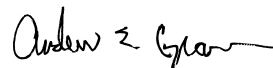
margins as we better utilize our fixed assets in this very high margin business. Our Fire Rescue Group has become very efficient in its manufacturing operations and will also benefit greatly from increased volume. Both our Safety Products and Environmental Products groups have significant commercial/industrial market segments, which will be slow in 2002 but should again begin growing in 2003. Since the vast majority of our businesses have either retained or grown market share this past year, we are well positioned to take advantage of a growing economy. Overall, we feel very good about our ability to deliver earnings increases greater than our sales increases over the next few years.

We are planning on another year of strong operating cash flow, as our lean initiatives will support the working capital reductions we are anticipating. This will enable us to again invest for our future, through both internal growth investments and acquisitions.

There were many outstanding efforts by our employees this past year that helped us outperform our markets. Our customers and shareholders can anticipate exactly that type of effort again in 2002.



*Joseph J. Ross*  
Chairman and  
Chief Executive Officer



*Andrew E. Graves*  
President and  
Chief Operating Officer

**Our Employees and Dealers Responded to the Events of September 11<sup>th</sup>...** Mike Heston, Director of Customer Service located at our Emergency One facility in Ocala, Florida, was traveling on business just outside New York City on the morning of September 11<sup>th</sup>. A former volunteer firefighter, Mike immediately realized the magnitude of the problems the City of New York Fire Department would be facing as he watched the World Trade Center towers collapse. Within hours of the attack, Mike and employees of Absolute Fire Protection, our dealership located in South Plainfield, New Jersey, were at Ground Zero with three trucks loaded with specialized equipment needed to support the rescue effort. Mike remained at Ground Zero for the next several days working continuously with officials of the FDNY in assessing damage to their

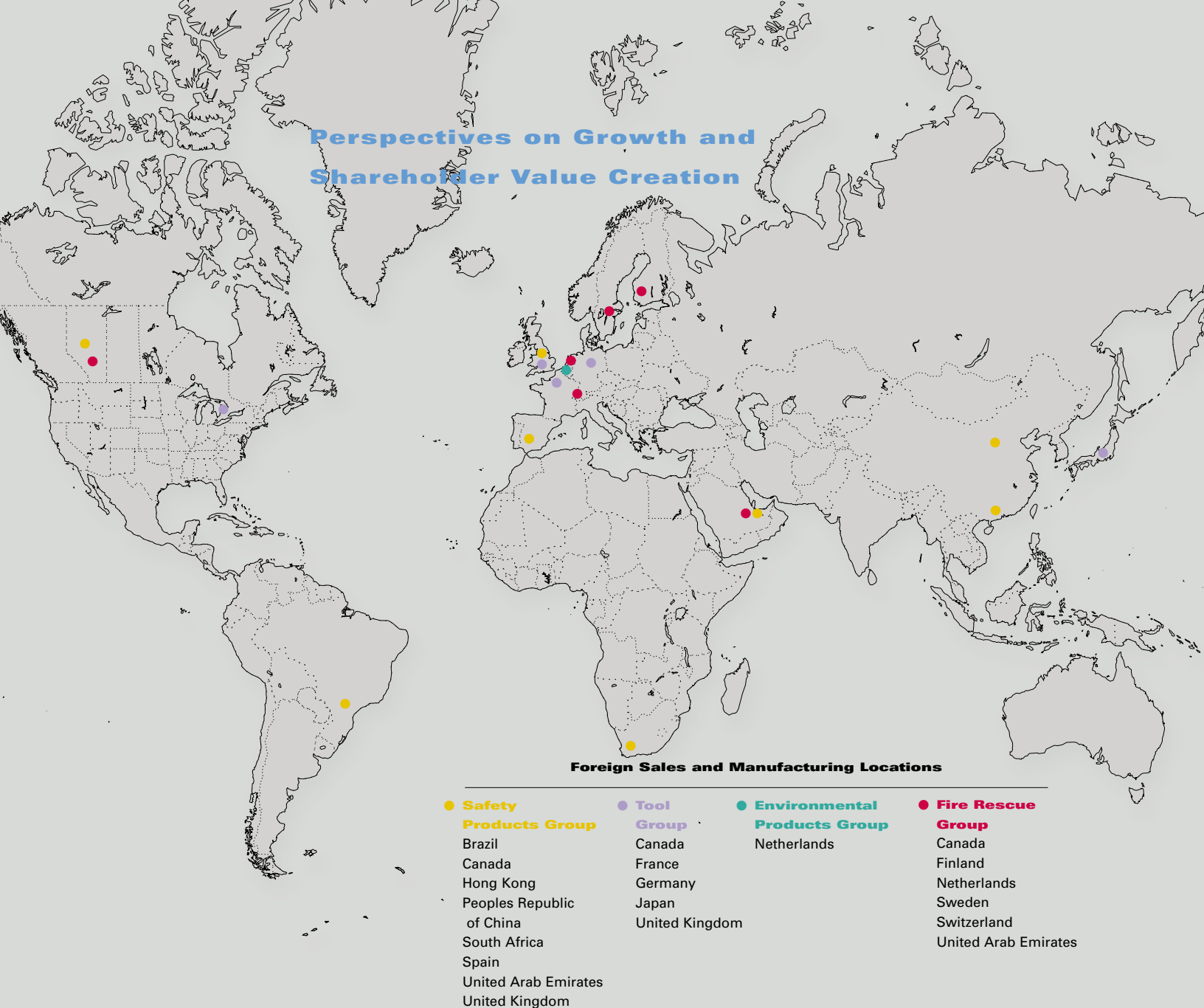
equipment. Mike also spent time at the Pentagon to help develop replacement plans for damaged equipment there. Emergency One employees responded to the needs at the nation's capital by reconfiguring a stock firefighting vehicle in a matter of days to replace the Pentagon's specialized truck that was totally destroyed in the terrorist attack.

At the same time, in response to a call for back-up equipment, employees located at our Saulsbury manufacturing facility in Preble, New York, quickly completed a hazardous material unit that was nearing completion for FDNY along with a stock rescue unit and delivered them to New York City the next day. Those employees not only delivered the vehicles but stayed on location around the clock assisting in the assessment of equipment damage.

While not involved at the scene, thousands of employees and many dealers of our company took action to support the rescue efforts. In one such response, the employees of our Emergency Products warning operations responded to emergency calls for additional lights and warning packages and worked substantial overtime hours to deliver the first of those products within two days of receiving the request.

We are proud of all of our employees who responded immediately and completely to the needs of the people and firefighters of New York City – not only those who were on location or specifically providing products and services, but also our many employees who responded to company blood drives and collection efforts in a show of support for our country and for the victims of these senseless acts of terrorism.

## Perspectives on Growth and Shareholder Value Creation



Federal Signal continues to be committed to the successful shareholder value-creation mission and supporting strategies that have been described in this annual report section for many years. They are restated below.

Federal Signal is a non-consumer market company with the following overall growth and value-creation strategy: *to be a market leader in profitable, growing, long product life cycle and lower technology markets. We target markets which are globally too small to attract major competitors. We strive to achieve high profitability and growth in these markets through superior distribution, product and process innovation and operating excellence.*

This overall strategy statement is supported by the following components:

- Sales and earnings growth is driven by market growth, increases in market share from new products and competitive advantages, penetration of identical markets in new, non-U.S. geography and entry into related (but not necessarily identical) U.S. markets.
- Internal growth is augmented by value-creating acquisitions in both current and complementary markets through the purchase of small to modest-sized, generally privately-held companies where combination benefits exist.





In September 2001 Federal Signal acquired 53% of Plastisol Holdings B.V., a Netherlands-based manufacturer of glassfiber reinforced polyester cabs and bodies for fire apparatus. Plastisol offers a significant growth opportunity in non-U.S. sales of fire rescue products and the possibility of future U.S. product applications, complementing the Fire Rescue Group's expertise in aluminum and steel construction.

The image to the far left is an illustration of the new airport rescue and fire fighting truck designed for a 34-unit order from the Royal Netherlands Air Force and Amsterdam Airport Schiphol to be delivered in 2002 and 2003.

- Above average profit margins are enhanced or maintained by leveraging leading positions in U.S. markets, leveraging U.S. product strengths in non-U.S. markets and lean manufacturing programs company-wide.
- Federal Signal operates under a decentralized management structure with incentive programs that are aligned with shareholder interests. Within this structure, we seek to attract a superior work force and then develop our employees through disciplined training programs and an entrepreneurial environment.

These strategies lead to high margin and high return on equity businesses with low capital intensity over the long-term, resulting in sufficient internally generated cash flow to sustain long-term growth.

The served markets summarized in the Corporate Profile on pages 2 and 3 normally expand every year as Federal Signal enters complementary market niches. Market expansion or entry activities are discussed in the group narratives on pages 12 through 27.

Our business unit competencies enable each unit to create new products or acquire them profitably to enter complementary market niches with minimal risk. Each business unit continuously develops core competencies specific to its markets, building sustainable competitive advantages that support profitable growth strategies.

The execution of our strategy, including some of our accomplishments during 2001, is described below:

#### **Operate Businesses with Leadership Positions in Select Market Niches**

Essentially all of our U.S. sales are from businesses that have leading positions in their main markets, ranking either #1 or #2 in market share. In newly entered segments leadership positions are targeted and action plans developed to achieve them. For example, in 2001 the Tool Group acquired On Time Machining Company (OTM), which specializes in the design and manufacture of indexable insert drills and milling cutters for the general machining industry. OTM will provide the Tool Group with new products and access to an entirely new segment of the cutting tool market with above-industry average growth opportunities. The acquisition will leverage existing distribution channels via a broader product offering while taking advantage of joint sales and marketing economies.

#### **Continually and Rapidly Improve our Businesses**

This strategy refers to the actions we take and the culture we maintain to steadily improve the competitive position and operating performance of each of our businesses, leading to increasing profit margins and market share.

The Federal Signal strategic and annual operating planning processes are used to develop appropriate operating action plans and assure that the Federal Signal culture is maintained. These processes set objectives supported by detailed written quarterly action plans for all key managers. These action plans include monthly and quarterly goals tied to incentive plans that ultimately support value-creating long-term objectives.

Each of our operating units has specific "critical success factors" that are their most significant variables for growth and profitability, the key components of shareholder value creation. These factors are included in annual operating plans and are targeted and monitored for improvement. Success factors cover areas such as customer satisfaction, speed of new product development, labor productivity and supplier relationships. While the largest improvements most often occur in our newly acquired businesses, we achieve steady progress in the elimination of non-value-added activities and costs in long-held businesses as well.

Starting in the last quarter of 2001, individual operating units' continuous improvement programs are being aligned with a corporate-wide lean enterprise program. This lean enterprise initiative has three key objectives: build competitive advantage through speed, raise asset productivity and eliminate waste. Each business unit establishes specific goals linked to strategic and annual operating plans and develops implementation plans in support of these goals.

New products are important to growth through market share expansion and entry into related market niches. Our groups introduced a number of new products in 2001, as discussed in the group narratives on pages 12 through 27.

Our company-wide Bold Goal program lowers costs through elimination of non-value-added costs as well as through advanced procurement methods and engineering design changes to minimize material costs. Bold Goal 2001 activities, which involved purchasing and supplier personnel, eliminated costs amounting to one to two percent of our targeted cost base in 2001. These savings are the net amount after price increases have been offset.

A large number of employees in all functional areas achieved important additional Bold Goal program savings during the year by finding lower cost ways to operate. Group operating performance, including Bold Goal procurement achievements in each group, is covered in the narratives on pages 12 through 27.

#### **Acquire, or Partner with, Companies in Related Businesses**

Most of our growth will come from our current businesses, yet we need to acquire businesses that fit well with our current groups in order to achieve our long-term earnings growth objective. Focused on expansion within our current lines of business, we target companies that:

- operate in attractive industries;
- offer leadership positions in niche markets;
- have good prospects for growth;
- would either benefit significantly from synergies with our existing strengths in marketing and manufacturing or would expand our markets geographically;
- have a high probability of achieving a rate of return that is at least 50% above our weighted average cost of capital.

As mentioned previously, in January 2001 we acquired OTM, which manufactures indexable insert drills and milling cutters. In March, we bought the assets of Athey Products Corporation, a manufacturer of street sweeping equipment. Athey was the leading North American producer of four-wheel mechanical street sweepers and also marketed three-wheel mechanical sweepers to both municipal and contractor customers. Federal Signal's Elgin Sweeper Company is the leading producer of three-wheel mechanical sweepers in North America and has a strong market position in the four-wheel mechanical, regenerative air and vacuum sweeping markets. This acquisition was very successful in augmenting the Environmental Products Group's growth in 2001 and more than half of the acquisition price was recovered by the end of the year.

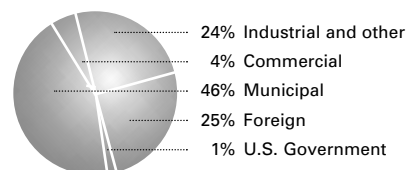


E-One introduced the new HP95 mid-mount platform to the fire service in August 2001. The unit was designed to meet the needs of fire departments requiring lower travel heights. For those departments preferring a mid-mount aerial, the HP95 platform is the optimal solution with its many new, innovative features.

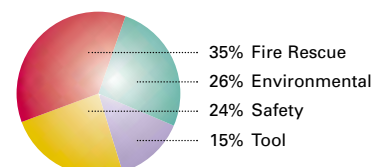
#### **Maintain our Diversification with Lower-Technology Businesses**

Diversity of markets is a key reason that we have had steady performance over the past years. While the swift decline in the U.S. industrial marketplace in 2001 led to our poorest results since 1983, we remain confident that our diversity will support steady growth over the longer term. Our diversity is demonstrated by the following 2001 sales charts:

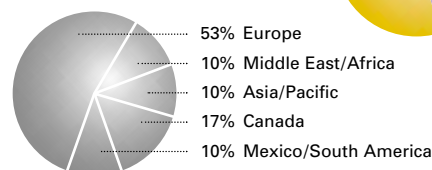
**Sales by Market**



**Sales by Group**



**Non-U.S. Sales by Geographic Area**



This diversity by marketplace is one of the drivers of our acquisition program. While we do not plan on having all groups equal in size, we do not want a single group to be the dominant driver of our performance.

We only acquire businesses with lower-technology products that are not subject to rapid obsolescence and which have barriers to entry. This, coupled with aggressive new product development, and a large municipal sales component, tends to reduce, but not avoid, the impact of economic cyclicality. Our products are diverse, but our business units have a great deal in common and the overall culture is to share knowledge and talent as needed. If a business unit has a competency needed at another unit, we provide it quickly through the transfer of people or the transfer of knowledge and training.

A very important example of sharing is the Federal Signal purchasing group, which not only shares techniques and personnel, but also helps each of our companies achieve their Bold Goal cost reduction targets. The purchasing group aggregates common supply needs such as steel and truck chassis, and usually negotiates multi-year contracts covering these needs. This advantage, which most of our single-business competitors do not have, is particularly helpful when we acquire a business or enter a new market niche with complementary products.

### Increase Penetration of Non-U.S. Markets

To achieve Federal's long-term growth and profitability objectives, our goal is to be a global leader in the markets we serve. We believe most of the niches we have traditionally served in the U.S. are in fact global in nature, and thus our traditional product offerings and the underlying technologies are well suited for global growth. While market share gains are still available in U.S. markets, our low market shares in many markets outside the U.S. and the emerging need by many of those economies for our products provide even greater opportunities for long-term growth. These opportunities are being exploited through exports of U.S. manufactured products, as well as alliances with and acquisition of non-U.S. manufacturers.

Our global growth strategy includes sourcing components for non-U.S. manufacturing operations from our operations in the U.S. These components include, for example, lighting sub-assemblies and semi-finished tooling. As a result, operating profits on non-U.S. sales are realized in three areas - sales produced from assets located outside the U.S., intercompany sales from U.S. to non-U.S.-based operations and direct export sales. Financial decisions relating to our growth strategy are based on relating the total profits realized for the target market and the assets employed by that segment.

In September 2001, we acquired 53% ownership in Plastisol Holdings B.V. located in the Netherlands. Plastisol manufactures glassfiber reinforced polyester cabs and bodies for fire apparatus, products which are just beginning to be

sold to the North American fire service. This emerging technology offers an excellent long-term growth vehicle for the Fire Rescue Group.

With experienced management in place and with many of our non-U.S. markets expanding faster than our U.S. markets, the global marketplace in our selected niches continues to offer a large long-term opportunity. While non-U.S. markets remained relatively slow in 2001, we continue to believe these markets will provide excellent long-term growth opportunities.

### Develop a Superior Work Force within a Decentralized Management Framework

Federal Signal manages on a decentralized basis to ensure timely decision-making and to enable our operating units to take actions necessary to accomplish our common growth and value-creation goals. This operating style and market closeness fosters innovation, efficiency and an entrepreneurial management style.

Federal's ultimate success depends on the quality and motivation of our employees. To acquire and retain quality employees, we seek people at all levels with superior potential and encourage their development through disciplined training programs. We rely on these quality employees, working in teams or individually, to find and implement ideas for improvements in our business. There were many such employee-generated improvements implemented throughout the company during the year. Two examples are described below.

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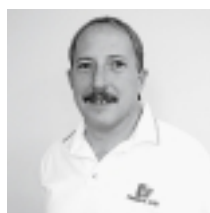
## Employee Innovation

We motivate employees with short-term and long-term incentive plans designed to link the interests of employees with those of shareholders. Employees now have an interest in approximately 13% of Federal's stock. We estimate that over half of our U.S.-based employees have an equity interest in Federal Signal Corporation.



From left: John Wince and Peter Sniadowski

The Environmental Products Group is transitioning to a lean enterprise operating philosophy designed to speed order completion, increase capacity and reduce inventory levels. A rapid improvement technique executed by production employees is being applied to simplify production flows and install demand-based "pull systems". Peter Sniadowski and John Wince created a unique visual "inventory gate" that helps operators trigger the pull systems to make the right quantity of parts available to meet customer demand. The application of lean enterprise techniques, coupled with a high level of employee involvement, allowed the group's Elgin-based sweeper manufacturing facility to improve inventory turnover more than 40% during 2001.



Dave Hoehn

One of the reasons Federal APD has a strong number one position in its U.S. parking revenue and access control market is its commitment to quality. Dave Hoehn enlisted some of his R&D colleagues to develop an automated device to test over fourteen parking gate functions in as little as twenty seconds. As a result, defects are identified and remedied before the parking gate leaves the factory. Problems found are quickly referred "upstream" in the manufacturing process and immediate corrective action is taken. Dave's idea has resulted in significant savings in field support costs and prevents many problems from reaching our customers.

## Financial Performance

Federal Signal is committed to shareholder value. Our most important financial objective is to produce superior long-term total returns for shareholders. In 2001, the total return on Federal Signal shares was 18% compared to a negative 12% for the S&P Industrials benchmark. This was the second consecutive year performance far exceeded that benchmark. Over five- and ten-year periods, Federal Signal's total return performance lags the benchmark, but is above it for the long-term fifteen-year period.

Federal Signal management focuses on the growth and profitability factors that drive shareholder value. Our long-term earnings per share growth objective is 10% plus an average long-term U.S. inflation rate, currently resulting in a nominal increase objective of about 12%. As with the total return to shareholders objective, we measure performance primarily over the long term, tracking performance over five-, ten- and fifteen-year periods. A much improved earnings performance in 2000 followed a period where we underperformed our objectives. We were well positioned for improved earnings coming into 2001; however, the U.S. industrial recession significantly affected our sales and earnings performance with both showing declines. Our underperformance in the most recent five-year period has contributed to underperformance over ten- and fifteen-year periods. We are convinced that structural changes to our organization and expected benefits from our new lean enterprise initiative will achieve targeted improvements in operating income and margins over the next several years. As a result, we are optimistic that earnings per share increases will be above the 12% benchmark for at least the next few years.

Our long-term objective for return on average shareholders' equity (ROE) is 20% or greater. Return on average common shareholders' equity before the effect of restructuring charges was 13.9% in 2001, the lowest return since 1986, as the U.S. economic downturn reduced net income significantly. Reported ROE including restructuring charges was 13.3%. We expect to exceed our 20% ROE target as earnings increase over the next few years. Internally, Federal Signal management uses a return on investment measure to focus strategy and action plans on asset productivity and cash flow.

Cash flow from operations rose nearly 50% to \$95 million in 2001 from \$64 million in 2000. This outstanding performance resulted from the continuing focus on return on investment, which includes best practices in working capital management. In 2001, improvements in receivables management contributed importantly to cash flow results.

Federal Signal's dividend policy was to maintain a dividend payout ratio of about 40%. After adjusting for the required goodwill amortization accounting change to take effect in 2002, the new dividend policy is to target a 35% payout ratio. This new target was set to retain sufficient cash for growth, including acquisitions, over the long term. For several years, the payout ratio has been well above this target ratio as earnings growth was lower than dividend increases. Over the future years, the company expects earnings growth to be much higher than dividend increases, resulting in a future payout ratio in the target range. During the next few years, the company expects working capital performance improvements, particularly reduced inventory requirements, to provide sufficient additional cash for growth investments while the dividend payout ratio returns to our targeted level.

Cash and stock used for acquisitions was \$23 million in 2001 compared to \$24 million in 2000. Capital expenditures declined to \$18 million from \$22 million in 2000 as growth spending was reduced during the U.S. economic downturn. Expenditures were primarily for machinery and equipment to raise productivity. Federal Signal's normal long-term capital spending ratio is about 2% of sales.

The debt-to-capitalization ratio for manufacturing operations was 44% at year-end 2001 compared to 45% at year-end 2000. Our normal target range is approximately 40%. This target was selected to minimize the company's cost of capital while maintaining a strong balance sheet and the financial flexibility to go above the target range for limited periods for desirable acquisitions.

Federal Signal's financial position remains strong and supportive of future growth.



## SAFETY PRODUCTS GROUP

	2001	2000	1999
	<i>(in thousands except employee data)</i>		
<b>Sales</b>	\$ 256,261	\$ 267,062	\$ 261,940
<b>Operating income*</b>	38,378	43,721	41,384
<b>Backlog at December 31</b>	31,561	18,493	27,334
<b>Total assets</b>	209,036	220,867	227,073
<b>Capital expenditures</b>	3,126	5,333	8,646
<b>Employees</b>	1,876	1,904	1,931

\* before restructuring charges of \$461 in 2001

The Safety Products Group manufactures and markets worldwide a broad range of safety-related products, serving public and industrial safety, parking control and hazardous area lighting markets.



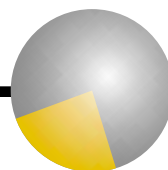
The Emergency Products Division introduced several new technology driven warning products for the ambulance/emergency medical service marketplace. Notable introductions include the EQ2B electronic siren, the MODLed series of perimeter lighting, brake/tail/turn light and the new JetStream LED lightbar.

### Leading Brands



### Operating Highlights

- Safety Products Group earnings before restructuring charges decreased 12% on a 4% sales decline.
- Substantial projects in parking equipment and outdoor warning systems were delayed into 2002.
- The group captured share gains in market segments of parking control equipment and emergency vehicle warning products.



Safety Products Group sales represent 24 percent of Federal Signal's total sales for 2001

### Operations Review

- Posted significant profitability increase in the hazardous area lighting product line.
- Reached record level new orders for parking and revenue control products driven by share gains in the airport market segment.
- Captured additional share of domestic police and fire market in the emergency vehicle warning product line.
- Launched significant new products across the group.

Safety Products Group operating income fell 12% before restructuring charges on a sales decline of 4%. Ten percent sales gains in domestic police and fire markets, along with gains in global hazardous area lighting markets, were more than offset by an 11% fall-off in U.S. industrial/commercial and outdoor warning sales. Despite the many cost containment initiatives implemented across the group, profit margins suffered as a result of sales shortfalls and a less profitable product mix. Orders were 4% higher than prior year based upon strength in global police/fire, outdoor warning, hazardous area lighting, domestic parking and European communications product lines.

### **The emergency vehicular signaling business captured additional market share with double-digit sales growth in domestic police and fire markets.**

However, this gain was partially offset by significant weakness in the domestic heavy truck amber light market where virtually all key customer segments reported unprecedented declines in activity. International emergency vehicular signaling sales enjoyed their second best year ever but fell short of 2000's record-breaking volume.

Hazardous area lighting products recorded strong income growth on a modest sales increase as a result of favorable product mix, effective cost containment and productivity improvement actions. The group achieved sales and market share gains in mining, marine and United Kingdom industrial product lines.

Outdoor warning products sales declined but new orders recorded double-digit increases, resulting in a large year-end backlog. Order rates picked up considerably toward the end of the year but too late to influence 2001 sales.



Electrical Products supplies audible signals, visual signals and voice communication for life safety, process control and wide area communication. Shown are warning lights, status indicators, intercom systems and sirens.

The industrial signaling, hazardous liquid containment and commercial parking and revenue control product lines in the U.S. declined as a result of recessionary U.S. industrial markets throughout the year. Focused efforts on securing available project and systems work and diversifying markets and channels minimized the declines. The group captured most of the large airport parking equipment projects awarded during the year, a dramatic success, which offset slow commercial markets and led to a record year for new orders.

The operating units within the Safety Products Group continue to execute the following key strategies to attain sales, market share and profit growth objectives:

- Build upon the market leadership position that most Safety Product Group businesses enjoy within their home markets.
- Increase market share in non-U.S. markets.
- Aggressively pursue cost reduction and productivity improvement.
- Develop and empower employees.



Efficiency...Security...Control...Federal APD offers the single, integrated solution for secure airport parking. APD technology includes a complete line of hardware and central management systems software for parking revenue and access control.

Due to the recessionary environment in many U.S. market sectors in 2001, the Safety Products Group fell short of key financial growth objectives. However, the group achieved market share gains in all major product categories and progressed on strategic initiatives that will make the group stronger for the future.

**A major component of the group's sales and profit growth strategies is the development and introduction of innovative new products.** During the year, sales of new products introduced over the last five years represented 25% of the group's total sales. Virtually all businesses launched major new products in 2001, capitalizing on the new product development efforts of the past few years.

The emergency vehicle signaling business expanded the application of light emitting diode (LED) technology with the introduction of the Spectre lightbar, a new all-LED lightbar for the police market. The advantages of LED technology over conventional light sources include reduced

power requirements and enhanced durability and reliability. The group also launched the SignalNet multiplexing system into the police market. Designed to simplify driver control over the various functions of a police car's warning system the SignalNet system also provides data logging and diagnostic capability.

The hazardous liquid containment business added several new safety and general storage cabinets and expanded its plastic storage and spill containment product offering. The parking and revenue control business introduced a new parking gate and added several functional enhancements to its ScanNet parking control software. The hazardous area lighting business introduced an industrial recessable fixture, an expanded temperature wellglass light and a plastic plug and receptacle.

**The group is intently focused on maximizing return on investment via cost reduction, productivity improvement and working capital minimization.** The group made significant progress in these areas, enabling it to offset a portion of the effects of the sales decline caused by the difficult economic environment.



Pauluhn and Victor Products address the needs of offshore drilling, shipbuilding and petrochemical plants that require marine grade, hazardous and industrial lighting and signaling products. Their combined product offering allows the company to meet both United States (NEC) and international (IEC) standards for lighting applications.



From cigarette butts to flammable liquids, Justrite's new products, sold through distribution channels worldwide, lead the industry in innovative environmental protection and safety containment products.

The group made considerable headway in permanently reducing the ongoing cost of doing business while not sacrificing its competitive position or future growth plans. In response to the economic downturn, all operations evaluated staffing levels and made appropriate adjustments considering both near-term business weakness and longer-term strategic opportunities. As part of this evaluation the group discontinued some marginal product lines, which will benefit the organization by minimizing overhead requirements and distractions from its core businesses. Bold Goal purchasing savings resulted from increased focus on supply chain cost reductions and many value analysis/value engineering projects. The group also made significant progress on 2002 savings as supply chain personnel capitalized on combining the purchasing requirements of several Federal Signal locations.

Across the group, the application of lean enterprise techniques resulted in process improvements to enhance productivity, increase throughput and reduce inventory requirements. The group reduced inventory levels by over \$2 million (about 7%), much greater than would be expected in a year that saw a 4% sales decline.

**The group continued to invest in education and development programs that provide the tools for increased employee contribution/involvement as well as prepare individuals for broader responsibility.** Group management conducted lean manufacturing, quality, sales/negotiations and leadership development programs throughout the year at most group locations. The two United Kingdom operations continued with their government-sponsored "Investors in People" program with the Newcastle location receiving a regional award for excellence. In an effort to share best practices between operations and provide developmental experience to future leaders, the number of people participating in cross company assignments and special projects again increased in 2001.

**Outlook** Although economic forecasts predict 2002 will be a year of modest growth at best, the Safety Products Group is poised for sales and income growth. The group expects to drive sales increases with its large backlog carried into the new year; successful market acceptance of new products; and the continuation of new market sector, channel and geographic expansion initiatives. This sales growth, combined with the restructuring changes implemented in 2001 and aggressive on-going cost reduction efforts, promises to accelerate income growth in 2002 and beyond.



## TOOL GROUP

	2001	2000	1999
	<i>(in thousands except employee data)</i>		
<b>Sales</b>	\$ 161,778	\$ 194,485	\$ 158,164
<b>Operating income*</b>	20,804	36,269	33,303
<b>Backlog at December 31</b>	10,748	14,679	13,085
<b>Total assets</b>	176,580	175,884	155,095
<b>Capital expenditures</b>	7,733	7,837	6,893
<b>Employees</b>	1,333	1,534	1,404

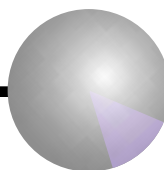
\* before restructuring charges of \$1,514 in 2001, \$971 in 2000



Dayton Progress Corporation is the world's largest manufacturer of standard and special precision perforating components for metal stamping applications. Dayton offers a complete line of products including standard catalog sizes and shapes as well as precision-intricate shapes available through special order.

### Operating Highlights

- Tool Group earnings before restructuring charges fell 43% on a 17% sales decline.
- The superhard cutting tool plant consolidation provided cost savings as demand temporarily declined for these products.
- The group held its leading market shares and even increased share in some product lines.



Tool Group sales represent 15 percent of Federal Signal's total sales for 2001

The Tool Group manufactures a broad range of high precision and consumable tools for metal stamping, metal cutting and plastic injection mold industries serving more than 14,000 industrial customers around the world.

### Leading Brands



### Operations Review

- Acquired On Time Machining Company (OTM), a manufacturer of indexable insert drills and milling cutters for use in metal cutting applications.
- Opened an office in Detroit, Michigan to service the die component needs of U.S. automotive customers.
- Initiated construction of a die component manufacturing plant in Portugal to support growth in Europe.
- Opened branch shipping locations in southern California and southern Ohio to improve sales and service of mold tooling components.
- Acquired manufacturing rights to a new, patented carbide cutting tool line.

The Tool Group financial performance was disappointing in 2001 with sales down 17% and operating income down 43% before restructuring charges. The U.S. industrial economy never recovered from the fourth quarter 2000 slowdown and the group experienced reduced demand for tooling products throughout the year. The group's high gross profit margin combined with the sharp reduction in sales lowered operating income significantly.

The Tool Group operates in targeted tooling niches, providing tools for metal cutting, metal stamping and plastic injection molding operations. Results in these niches were as follows:

- Carbide cutting tool sales were flat in 2001 as sales from the OTM acquisition helped offset depressed industrial demand for the group's base products.
- Superhard cutting tool sales were down 29% due to significant reductions in automotive production and delays in many new automotive projects that require new tooling.
- Order rates for mold tooling in 2001 were down 15%.
- Die component tooling sales decreased 19%. All U.S. die component tooling segments declined except the can tooling segment where sales were flat in 2001. Non-U.S. die components sales decreased 11% as European and Canadian economies slowed in the second half of the year.



Clapp Dico is the U.S. market leader in the manufacture of superhard cutting tools for machining hardened steels and high-silicon aluminum. These tools are used in the production of engines, transmissions and other vehicle components. Clapp Dico provides a complete product offering for turning, milling and drilling applications.

### The die components segment of the Tool Group is the clear market leader in the U.S. and maintained market share in 2001.

In the second quarter of the year, the group opened a sales office in Detroit to secure more business from automotive manufacturers and their suppliers in that area. To support future growth in non-U.S. markets, the group began constructing a manufacturing facility in Portugal for metric die components. This facility should start up in the second half of 2002 and serve the European market at improved gross margins.

New product development is important to sales growth in the Tool Group. In 2001, about 13% of cutting tool sales and about 11% of total group sales were from new products developed over the last five years.



On Time Machining Company (OTM) provides an extensive range of indexable inserted drills capable of significantly increasing the productivity of machining holes into a wide variety of components and parts.

Twenty percent of the Tool Group's mold tooling sales in 2001 was from the mold base product line introduced in late 1999. The group was able to increase market share slightly in mold bases by offering additional sizes and expanded capability to meet broader customer needs. To better serve customers in California, Arizona, southern Ohio and southern Indiana, the group opened two new branch locations. Tool Group management expects to gain share in these key markets beginning in 2002.

The group's superhard cutting tool sales continue to lead the U.S. market with an approximate 30% share. The new round tool segment of the superhard product line continues to grow. The group also developed a new line of milling cutters for release in early 2002.

In the carbide cutting tool business, the group added products in drilling and end milling. These additions result in a very broad and competitive product offering for improving sales in 2002. The group also further enhanced its competitive position with additional new distribution in Europe and several sales representation improvements in other non-U.S. markets.

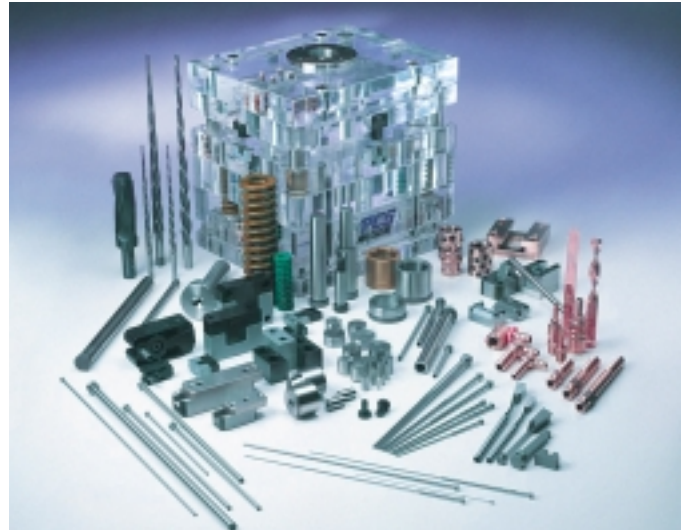
**The Tool Group significantly improved cost management in 2001.** The group's Bold Goal initiatives targeted spending reductions as all business units worked closely with suppliers to reduce direct and indirect material requirements. The U.S. carbide manufacturing facility launched a lean enterprise initiative in the second half of the year to reduce inventory, improve on time delivery performance and improve overall product quality. The mold tooling manufacturing plant implemented a new forging process for large mold tooling pins. U.S. die components manufacturing facilities removed 7,000 labor hours annually through capital improvements and process changes. The superhard products unit made several capital investments to improve quality, reduce cost and reduce production lead times.

The group continued to increase the synergies between its various business units. The acquisition of OTM in January 2001 exceeded profit expectations, as the carbide segment's distribution network was able to expand the sales of OTM's products to many new customers and at lower costs. Many die component distributors took on the group's mold tooling product line for the first time in 2001. The consolidation of the group's two superhard product facilities, completed at the end of 2000, also paid dividends in cost savings as the demand from automobile manufacturers and suppliers for these products temporarily declined in 2001.

**During the year the Tool Group continued to invest in skills improvement training and education.**

All group operations provided additional computer training, supervisory skills training and various shop skills improvement programs. The group continued to make substantive progress in the QS 9000 programs at both the superhard and carbide manufacturing plants. The Dayton, Ohio die component facility started an ISO 9000 certification effort in late 2001; the mold tooling plant in Michigan and the die component facility in Canada are already ISO 9000 certified. In the second half of 2001, the group trained its top manufacturing personnel in the concepts of lean manufacturing.

**Outlook** The group expects the 2002 global industrial market to continue to be very soft. It also expects European markets to be slightly stronger than the U.S. market in 2002 and primary Asian markets to continue to be very slow. Group global sales for 2002 are expected to be flat to up slightly. Income performance improvement for the Tool Group in 2002 will be driven by new product introductions, start up of the Portugal die component manufacturing facility, cost reductions in the purchase of required materials and benefits from the group restructuring in the fourth quarter of 2001.



P.C.S. Company markets a wide variety of tooling components for use in the plastic injection molding and die cast industries. P.C.S. is recognized as a national source for providing high quality pins, cores, sleeves, mold bases and many other accessories to mold manufacturers.



The Environmental Products Group manufactures and markets worldwide a full range of street and parking lot sweeping, industrial vacuuming, municipal catch basin/sewer cleaning vehicles and high-performance water blasting equipment.

## Leading Brands



## ENVIRONMENTAL PRODUCTS GROUP

	2001	2000	1999
	<i>(in thousands except employee data)</i>		
<b>Sales</b>	\$ 280,708	\$ 255,269	\$ 247,097
<b>Operating income*</b>	20,957	25,874	24,454
<b>Backlog at December 31</b>	68,608	72,275	57,171
<b>Total assets-manufacturing</b>	153,406	149,622	143,320
<b>Total assets-financial services</b>	72,581	69,055	66,096
<b>Capital expenditures</b>	4,554	4,137	3,241
<b>Employees</b>	1,219	1,134	1,107

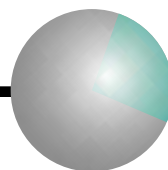
\* before restructuring charges of \$798 in 2001, \$2,773 in 2000



The Environmental Products Group continues its tradition of innovative new products for governmental and industrial applications. The Vaxjet system, a patented mobile, closed-loop surface cleaning system, removes and filters dirt, oil, grease, rubber and other accumulations.

### Operating Highlights

- Environmental Products Group earnings before restructuring charges decreased 19% while sales increased 10%.
- New product introductions and an acquisition drove a 7% increase in U.S. orders.
- Restructuring, plant consolidation and new product development costs temporarily reduced operating margin and earnings.



Environmental Products Group sales represent 26 percent of Federal Signal's total sales for 2001

### Operations Review

- Achieved record new business level totaling \$277 million, up 2%; U.S. orders grew 8%.
- Share gains in the U.S. sweeper market drove total group sales up 10%.
- New product introductions drove market share gains in recently entered niche markets.
- Investments in new products and plant consolidation temporarily reduced operating margin.

In 2001, Environmental Products Group (EPG) sales increased 10% notwithstanding a slowing U.S. industrial market. EPG was able to offset a decline in sales to industrial customers with increased sales to municipal customers worldwide. Operating income declined 19% before restructuring charges, as investments in new products and plant consolidation temporarily reduced operating margin.

**During the year, EPG became the clear market leader in the four-wheel mechanical sweeper segment in the U.S. with its Elgin Eagle and Broom Bear models - a significant achievement.**

This complemented the strong number one position already held in the three-wheel mechanical market segment. EPG also gained share in U.S. and non-U.S. markets with niche products such as the Elgin Air Cub parking lot sweeper, the Vactor Hydroexcavator vacuum truck and the Vaxjet closed-loop surface cleaner product. The first quarter acquisition of the Athey/Mobil branded product line and introduction of the new Maximum Vacuum (MV) Elgin Whirlwind model in the second quarter contributed to sales gains in the U.S. sweeper market. Although the total worldwide industrial market declined for EPG and its competitors, the group increased share in large strategic water blasting equipment accounts and also increased sales to the oil and gas market segment for water blasting equipment. In 2001, sales of new products introduced over the last five years represented about 30% of the group's total sales.



The popular Elgin Eagle mechanical sweeper is now available with a compressed natural gas (CNG) power system. The Eagle sweeper, along with other Elgin sweeper products, is ready to meet the July 2002 California requirements for alternatively fueled vehicles. Elgin's Eagle and Broom Bear sweepers together hold the market leadership position in the four-wheel mechanical sweeper market.

Orders from non-U.S. markets were mixed. Mexico and Middle East markets were up significantly, while European and Far East markets were down.

While EPG established record sales in 2001, operating income fell. A key reason for the decline in income was a temporary increase in costs related to the fourth quarter 2000 consolidation of industrial and municipal vacuum truck production into one facility; productivity improvement, which was one of the objectives of the consolidation, did not materialize as quickly as planned. A second objective of the consolidation project was to eliminate lower margin products and cost effectively produce higher margin units. The group accomplished this by mid-year, positioning Guzzler brand products more competitively. While consolidation costs were high, these costs were far lower than if plant consolidation had not been completed before the market downturn for industrial vacuum trucks.

In order to satisfy customers who purchased certain new products launched in 1999 and 2000, EPG incurred temporarily higher costs in 2001 as it completed necessary product modifications. As market leader, EPG's approach to customer satisfaction is to do whatever is reasonable and necessary to assure the customer realizes the value of the product purchased. The additional spending was completed in 2001.



Vactor Manufacturing's facility in Streator, Illinois expanded production during 2001 with the consolidation of the Guzzler brand. The plant now produces the full range of Vactor brand products including the HXX hydroexcavator (shown above), the Vaxjet system, the 2100 Series and the GRV (glycol recovery vehicle) truck in addition to the Guzzler brand industrial vacuum loaders, including the market-leading ACE truck.

The group executes the following key strategies to achieve profitable growth objectives and deliver value to customers:

- Maintain the lead in technology development and application.
- Develop or acquire new products to serve existing markets and create new markets.
- Provide global customer support capability for every market, every customer, every product.
- Apply the principles of lean enterprise systems, progressive supply chain management and prevention-oriented quality assurance systems throughout all facilities and processes.
- Create and maximize synergies and capabilities of all disciplines and functions across business units and product lines.
- Provide leadership and empower employees throughout the organization.

#### Several EPG locations made significant progress in the implementation of lean enterprise principles.

The objectives of this effort are to dramatically reduce the "order-to-cash" cycle, improve quality and reduce customer delivery lead time, operational costs and primary working capital. Results in 2001 were encouraging at the Elgin, Illinois sweeper facility, which shipped over 25% more sweepers with no increase in fixed investment and only a 5% increase in working capital. The North Carolina sweeper facility achieved a 40% reduction in throughput time and a 10% reduction in product cost during the second half of the year by installing progressive assembly processes and reducing material costs. EPG management expects the lean enterprise implementation schedule to significantly improve operational performance throughout the group each year. Supplier strategic alliances also have a major effect on reducing costs; EPG supply chain management and supplier alliances reduced costs for purchased materials and services within the group during 2001.

Customer requirements for clean cities and streets, clean industrial environments and well-maintained sewer systems drive long-term sales growth potential for EPG. Air and



Jetstream is a leading supplier of ultra-high-pressure water blast units, pumps, fluid end conversions, parts and accessories. Jetstream made significant strides during the year on new product development with its 40k PSI products. Jetstream plans to launch a comprehensive on-line ordering system, allowing contractor and industrial customers to order parts and accessories, track orders or review order history – 24 hours a day, 7 days a week.





water regulations, as well as infrastructure development and repair, also play key roles in determining customer needs. EPG has a unique ability to grow by creating solutions for specific customer needs. The group is also adept at delivering products and services that provide greater than expected customer benefits. As a result, EPG has developed a reputation for providing the widest array of high-performing environmental cleaning equipment in the industry. It is no accident that EPG, through its network of supplier and distribution partners, achieves premium pricing for many different products because the group delivers value to customers.

EPG also grows by using diverse distribution channels to deliver niche products such as parking lot sweepers, hydroexcavators, closed-loop surface cleaning systems and ultra-high pressure water blasting equipment to industrial and contractor customers. The strength of these channels, combined with the service system of the dealer channel, offers tremendous capability to serve a wide variety of customers. Marketing alliances and joint product development activities, such as one developed during 2001 with Minuteman International/Powerboss, also create sales opportunities. In addition, the EPG E-Store concept to be launched in early 2002 will allow customers to order water blasting parts and accessories simply and directly without going through multi-layered distribution channels. EPG expects to apply this E-Store concept to other group products in the future.

European sales for the Environmental Products Group grew 7% in an extremely competitive marketplace. The introduction of new products, such as the RAVO 3 Series sweeper helped contribute to this growth.

**Processes and systems work well when combined with the group's highly talented and empowered employees.** The quality of EPG people is a competitive advantage recognized by customers and competitors alike. For this reason, EPG places a premium on acquisition, education, development and retention of employees who are focused on creating value for customers and the group. Each employee has certain training and development objectives to accomplish each year. There are also special education and training requirements associated with certain business initiatives such as lean enterprise. For example, approximately 20% of employees throughout EPG received formal training in 2001 on lean enterprise applications in the group; the balance will receive that training in 2002. To insure success, the group aligns communication processes and employee compensation plans with business objectives.

**Outlook** EPG expects municipal market activity in the U.S. to slow down even though backlogs entering 2002 were strong. Industrial buying patterns have already been affected by the slowdown in the U.S. economy and the group expects those markets to remain soft throughout most of the year. The group expects non-U.S. markets to be flat throughout the year.

In contrast, EPG new product introductions and niche market penetration offer an opportunity to offset weak markets and exceed 2001 sales levels. The Environmental Products Group expects a moderate sales increase in 2002 as well as increased operating income and profit margins. Supporting these improvements will be the group's increasing emphasis on lean enterprise implementation, material cost reductions and the benefits of plant consolidation.



The Fire Rescue Group manufactures and markets worldwide a full range of fire apparatus, airport rescue and fire fighting trucks, emergency medical rescue and transport vehicles and aerial access platforms.

## Leading Brands



## FIRE RESCUE GROUP

	2001	2000	1999
	<i>(in thousands except employee data)</i>		
<b>Sales</b>	\$ 373,428	\$ 389,311	\$ 310,008
<b>Operating income*</b>	28,048	24,940	10,900
<b>Backlog at December 31</b>	241,236	234,424	231,873
<b>Total assets-manufacturing</b>	203,749	201,960	200,950
<b>Total assets-financial services</b>	166,539	145,175	125,165
<b>Capital expenditures</b>	2,981	4,958	4,598
<b>Employees</b>	2,165	2,331	2,278

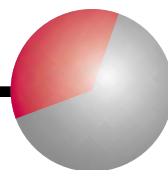
\* before restructuring charges of \$854 in 2001



The new E-One Typhoon rescue pumper delivers reliability, durability and safety in a value-based cab. The Typhoon pumper is the engineered result based directly on input from the fire service.

### Operating Highlights

- Fire Rescue Group earnings before restructuring charges were up 12% on a 4% decline in sales.
- The United States FIRE Act grant program and September 11<sup>th</sup> related events delayed many orders to year end and sales deliveries into 2002.
- All Fire Rescue Group manufacturing operations continued to improve, an important factor in operating margin improvement of 1.1 percentage points before restructuring charges.



Fire Rescue Group sales represent 35 percent of Federal Signal's total sales for 2001

### Operations Review

- Achieved operating margin improvement of 1.1 percentage points before restructuring charges, largely driven by productivity gains.
- Received award for a \$30 million, three-year contract from the Royal Netherlands Air Force.
- Acquired a 53% ownership in a Netherlands-based manufacturer of fire apparatus cabs and bodies.
- Introduced several new products.

Margin expansion in 2001, driven by better operating performance throughout the group, was key to a 12% earnings increase before restructuring charges on a 4% sales decline. The sales decrease occurred as orders were delayed into the last weeks of the fourth quarter, which built year-end backlog rather than fourth quarter sales. Overall, worldwide markets were essentially flat for the year. In North America, the United States FIRE Act grant program and the events of September 11<sup>th</sup> caused unusual order patterns in 2001, delaying many orders to year end and sales deliveries into 2002.

**The Fire Rescue Group (FRG) operated successfully in a competitive environment in 2001, retaining a strong market position in North America and adding to its commanding lead in fire access platforms worldwide.** To build future profitable growth in North America, FRG launched many new products in 2001 that are expected to deliver share gains in municipal markets. For example, FRG successfully introduced two new aerial devices: an E-One HP95 mid-mount platform and a Bronto F100 RLP (rescue ladder platform) rear-mount platform. The HP95 platform carries unique important performance features and the new F100 RLP established an entirely new product category with superior versatility. Key engineering personnel coordinated multi-location resources and developed both products in a short time. The Bronto F100 RLP consists of an E-One brand chassis produced in Florida, a Saulsbury brand body produced in New York and a Bronto brand aerial device produced in Finland.



Miami International Airport, one of the busiest airports in the world, recently purchased an E-One Titan HPR 6x6 airport rescue fire fighting (ARFF) vehicle to protect the airport and its surrounding property.

Additionally, the group introduced a complete new cab/chassis product, the E-One Typhoon chassis, an entry-level fire service custom chassis positioned at a value-based price. The Typhoon chassis has been well received and is expected to provide additional growth opportunities in the custom chassis portion of the North American municipal segment. The group also introduced a revamped Hush cab/chassis with a new engine package. Pioneered by E-One, the Hush chassis is uniquely differentiated by eliminating the engine in the cab thereby providing maximum passenger space and optimal interior communication capability.

The group also broadened brand strength in 2001 with the introduction of the new Tradition series family of products. The Tradition series is positioned for value-driven customers and available with both extruded aluminum and stainless steel bodies. In 2001, 50% of the purchasers of the Tradition series products were first-time FRG customers.

Wildfires are a significant priority for fire departments throughout North America. FRG operations in Red Deer, Alberta developed an enhanced family of products for wildlands fire applications. Included are a quick attack vehicle with a compressed air foam system and a complete range of elliptical water tankers.

The group also introduced a newly designed aircraft rescue and fire fighting (ARFF) vehicle, a light-duty combined agent vehicle (CAV) for airport customers and a



E-One recently introduced the new Tradition series products for fire departments serving smaller cities, towns or villages and requiring dependable, rugged fire and rescue trucks at affordable prices. With value in mind, E-One developed a broad range of products with classic features and traditional E-One construction to meet the budgets of smaller communities and volunteer departments.

more robust industrial pumper for the global market. The new ARFF, CAV and industrial pumper designs improve the group's competitive position in global airport and industrial fire service segments.

FRG's new products are vital to continued long-term growth and profitability. About one-third of the group's new orders in 2001 were from products introduced during the last five years.

In 2001, the group secured its largest single European contract ever, a 34-unit airport truck order for the Royal Netherlands Air Force and Amsterdam Airport Schiphol. The designs for these vehicles will provide an important opportunity to introduce an even better ARFF vehicle to the world airport market in 2002.

In September, the group acquired a 53% interest in Plastisol Holdings B.V., a manufacturer of fire apparatus cabs and bodies located outside of Amsterdam. Plastisol manufactures products using glassfiber reinforced polyester, adding to FRG's existing competencies in extruded aluminum and stainless steel fabrication and creating additional growth opportunities. Plastisol is providing cabs and bodies for the 34-unit airport order noted above.

The Bronto brand, manufactured in Finland, grew its European market share significantly in 2001 in a very weak market. The success resulted from multi-year engineering investments in aerial ladder platform (ALP) products. ALP products, based on a concept first introduced by Bronto in 1984, are more versatile in operation than the conventional European ladder truck and may well obsolete the conventional design. In 2001, about half of Bronto brand sales came from new products introduced over the last two years.

**The group achieved important successes with its lean enterprise program in 2001.** The FRG Ocala operations team improved customer satisfaction and expanded operational efficiencies, achieving stretch goals in these areas during 2001:

- Cycle time reduction – The team mapped and studied each step of the manufacturing process from bid proposals through shipment. Improved business system and engineering software tools reduced cycle time and increased accuracy of the product designs. On the shop floor, expanded use of visual factory techniques and short interval scheduling reduced process delays. Together, these initiatives reduced overall manufacturing cycle time about 25%.



NOVA Chemicals in Joffre, Alberta has undergone major expansion over the past four years and now is one of the largest petrochemical processing facilities in North America. To adequately protect this large and growing complex, the Joffre department recently added a Bronto 118-foot heavy-duty telescopic platform, an E-One industrial foam pumper, and a Superior Super Jack Rabbit quick attack unit.



- **Reduced cost of quality** – The ISO 9001 quality system, established in 2000, laid the foundation for defect elimination in 2001. “Quality at the source” methods decreased customer defects over 20% and increased defect-free customer inspections by almost 100%. New groups were formed combining key process experts from quality assurance and manufacturing groups. These groups corrected defects and then corrected the processes that caused the defects. Engineers used six-sigma tools to analyze complex interactions and changed designs to eliminate potential process failures. The Ocala operation revised workmanship standards and retrained product line teams. Results to date have been dramatic – first pass yield has doubled.
- **On-time completion** – Fire Rescue Group management plans and controls the shop floor using visual factory techniques. In 2001, the group expanded visual planning and control systems to the cell level. Each week cell teams meet and review important metrics including safety, quality, schedule performance, productivity and housekeeping. Safety and housekeeping improved dramatically and, in the second half of the year, on-time completion performance improved more than 50%.

The changes in 2001 resulted in major improvements for FRG customers and the FRG organization. In addition, product, process and organizational strategies have established the foundation for major improvements planned for 2002. The 2001 improvements have added greatly to already successful programs such as Bold Goal, which reduced FRG’s actual costs of purchases in 2001.

**One of the keys to continued success within FRG is the development of its people.** In addition to on-going strategic partnerships with educational institutions, the group has successfully acquired state funding in a variety of training initiatives. Fifty-two supervisors and managers in Ocala successfully completed a Management Certificate Program through the University of Alabama in conjunction with Central Florida Community College. E-One Corporate University, located at Central Florida Community College, enrolled 752 employees for various trade classes. A large number of FRG employees attended workshops related to the lean manufacturing initiative in 2001 and this will continue in 2002. As an



The City of Fitchburg, Wisconsin recently took delivery of a new Saulsbury heavy-duty rescue to help protect its approximately 22,000 people and 35-square mile area. The unit’s stainless steel body rescue features multiple shelves, slide trays and tool boards to carry a vast amount of tools and equipment.

example, beginning in January 2002, the entire Preble, New York workforce will receive 24 hours of training in lean manufacturing principles and techniques funded by the New York Department of Labor and administered by the local Onondaga Community College.

**Outlook** The Fire Rescue Group expects its markets will be stable to slightly improving in 2002. Global terrorist threats and the United States FIRE Act grant program create an environment that is expected to support global fire apparatus demand. Building on the strength of an ever-growing worldwide distribution network, new products and continued operational improvements will position FRG to profitably grow in both of its major market segments, municipal and airport, throughout the year.



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**Forward-Looking Statements** This document contains various forward-looking statements. Statements in this document 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: economic conditions in various regions, product and price competition, raw material prices, foreign currency exchange rate changes, technology changes, patent issues, litigation results, legal and regulatory developments and other risks and uncertainties described in documents filed with the Securities and Exchange Commission.

# FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## SELECTED FINANCIAL DATA

	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>	<u>1997</u>	<u>1996</u>	<u>1995</u>	<u>1994</u>	<u>1993</u>	<u>1992</u>	<u>1991</u>
<b>Operating Results</b>											
<b>(dollars in millions):</b>											
Net sales (a)	\$1,072.2	\$1,106.1	\$ 977.2	\$936.8	\$858.6	\$814.1	\$744.9	\$611.1	\$506.7	\$462.1	\$407.9
Income before income taxes (a,b)	\$ 64.5	\$ 84.4	\$ 79.3	\$ 79.4	\$ 81.5	\$ 86.6	\$ 77.8	\$ 66.2	\$ 57.6	\$ 51.7	\$ 47.4
Income from continuing operations (a,b)	\$ 46.6	\$ 57.7	\$ 54.4	\$ 55.1	\$ 56.9	\$ 57.8	\$ 51.9	\$ 44.3	\$ 39.0	\$ 35.6	\$ 32.1
Operating margin (a)	8.6%	10.5%	10.4%	10.4%	11.2%	11.8%	12.1%	12.2%	12.4%	12.3%	12.8%
Return on average common shareholders' equity (b,c)	13.3%	16.2%	17.0%	19.1%	20.6%	23.8%	22.0%	22.3%	21.0%	20.0%	20.0%
<b>Common Stock Data</b>											
<b>(per share) (d):</b>											
Income from continuing operations—diluted	\$ 1.03	\$ 1.27	\$ 1.18	\$ 1.20	\$ 1.24	\$ 1.26	\$ 1.13	\$ .96	\$ .85	\$ .77	\$ .70
Cash dividends	\$ .78	\$ .76	\$ .74	\$ .71	\$ .67	\$ .58	\$ .50	\$ .42	\$ .36	\$ .31	\$ .27
Market price range:											
High	\$ 24.63	\$ 24.13	\$ 28.06	\$27.50	\$26.75	\$28.25	\$25.88	\$21.38	\$21.00	\$17.63	\$15.19
Low	\$ 17.00	\$ 14.75	\$ 15.06	\$20.00	\$19.88	\$20.88	\$19.63	\$16.88	\$15.75	\$12.38	\$ 9.25
Average common shares outstanding (in thousands)	45,443	45,521	45,958	45,846	45,840	45,885	45,776	45,948	46,155	46,157	46,126
<b>Financial Position at Year-End</b>											
<b>(dollars in millions):</b>											
Working capital (e)	\$ 162.9	\$ 60.0	\$ 71.6	\$116.0	\$ 41.6	\$ 40.6	\$ 48.8	\$ 53.9	\$ 52.8	\$ 49.5	\$ 44.9
Current ratio (e,f)	1.9	1.2	1.3	1.6	1.2	1.2	1.3	1.4	1.5	1.6	1.5
Total assets	\$1,015.6	\$ 991.1	\$ 948.6	\$836.0	\$727.9	\$703.9	\$620.0	\$521.6	\$405.7	\$363.7	\$341.2
Long-term debt, net of current portion	\$ 232.7	\$ 125.4	\$ 134.4	\$137.2	\$ 32.1	\$ 34.3	\$ 39.7	\$ 34.9	\$ 21.1	\$ 16.2	\$ 15.6
Shareholders' equity	\$ 359.4	\$ 357.4	\$ 354.0	\$321.8	\$299.8	\$272.8	\$248.1	\$220.3	\$199.2	\$179.0	\$164.8
Debt-to-capitalization ratio (e)	44%	45%	42%	37%	30%	28%	29%	22%	1%	2%	1%
<b>Other (dollars in millions):</b>											
New business (a)	\$1,082.4	\$1,113.7	\$1,018.8	\$967.9	\$888.8	\$851.3	\$704.9	\$631.5	\$526.0	\$455.0	\$405.2
Backlog (a)	\$ 352.2	\$ 339.9	\$ 329.5	\$305.0	\$254.7	\$227.6	\$190.0	\$204.0	\$167.6	\$143.4	\$146.8
Net cash provided by operating activities	\$ 95.1	\$ 64.4	\$ 57.7	\$ 75.5	\$ 64.2	\$ 61.4	\$ 62.9	\$ 53.8	\$ 48.8	\$ 40.2	\$ 43.9
Net cash (used for) investing activities	\$ (59.2)	\$ (64.8)	\$ (105.1)	\$ (93.0)	\$ (38.4)	\$ (54.2)	\$ (88.1)	\$ (96.9)	\$ (38.1)	\$ (26.9)	\$ (47.8)
Net cash provided by (used for) financing activities	\$ (32.6)	\$ 5.2	\$ 40.9	\$ 22.2	\$ (27.5)	\$ (4.1)	\$ 29.9	\$ 45.1	\$ (10.3)	\$ (11.2)	\$ 2.5
Capital expenditures (a)	\$ 18.4	\$ 22.3	\$ 23.4	\$ 19.2	\$ 18.2	\$ 15.2	\$ 14.2	\$ 9.9	\$ 9.1	\$ 7.6	\$ 10.4
Depreciation (a)	\$ 20.0	\$ 19.5	\$ 17.1	\$ 14.9	\$ 13.3	\$ 11.8	\$ 10.5	\$ 8.9	\$ 7.5	\$ 6.8	\$ 6.2
Employees (a)	6,631	6,936	6,750	6,531	6,102	5,721	5,469	4,638	3,847	3,635	3,505

(a) continuing operations only

(b) in 1996, includes gain on sale of subsidiary of \$4.7 million pre-tax, \$2.8 million after-tax or \$.06 per share

(c) in 1995, includes the effect of a nonrecurring charge for a litigation settlement related to a discontinued business of \$4.2 million after-tax

(d) reflects 3-for-2 stock splits in 1991 and 1992, and a 4-for-3 stock split in 1994

(e) manufacturing operations only

(f) in 2001, increase largely attributable to refinancing of short-term debt with funded long-term debt

**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**

	<u>December 31,</u>	
	<u>2001</u>	<u>2000</u>
<b>Assets</b>		
Manufacturing activities:		
Current assets		
Cash and cash equivalents	\$ 16,882,000	\$ 13,556,000
Accounts receivable, net of allowances for doubtful accounts of \$2,355,000 and \$2,629,000, respectively	158,994,000	167,964,000
Inventories—Note B	152,841,000	157,619,000
Prepaid expenses	13,608,000	9,797,000
Total current assets	342,325,000	348,936,000
Properties and equipment Note C	113,742,000	112,596,000
Other assets		
Intangible assets, net of accumulated amortization	280,888,000	274,925,000
Other deferred charges and assets	25,143,000	25,873,000
Total manufacturing assets	762,098,000	762,330,000
Net assets of discontinued operations, including financial assets	14,396,000	14,558,000
Financial services activities—Lease financing and other receivables, net of allowances for doubtful accounts of \$1,005,000 and \$683,000, respectively, and net of unearned finance revenue—Note D	239,120,000	214,230,000
Total assets	<u>\$1,015,614,000</u>	<u>\$991,118,000</u>
<b>Liabilities and Shareholders' Equity</b>		
Manufacturing activities:		
Current liabilities		
Short-term borrowings—Note E	\$ 28,849,000	\$145,813,000
Accounts payable	53,292,000	60,878,000
Accrued liabilities		
Compensation and withholding taxes	24,816,000	25,387,000
Other	61,761,000	48,395,000
Income taxes—Note F	10,712,000	8,447,000
Total current liabilities	179,430,000	288,920,000
Other liabilities		
Long-term borrowings—Note E	232,678,000	125,449,000
Deferred income taxes—Note F	29,280,000	27,835,000
Total manufacturing liabilities	441,388,000	442,204,000
Financial services activities—Borrowings—Note E	213,917,000	191,483,000
Total liabilities	655,305,000	633,687,000
Minority interest in subsidiary—Note K	873,000	
Shareholders' equity—Notes I and J		
Common stock, \$1 par value, 90,000,000 shares authorized, 47,378,000 and 47,067,000 shares issued, respectively	47,378,000	47,067,000
Capital in excess of par value	73,177,000	68,693,000
Retained earnings—Note E	312,206,000	299,985,000
Treasury stock, 2,249,000 and 1,763,000 shares, respectively, at cost	(45,486,000)	(34,302,000)
Deferred stock awards	(2,179,000)	(1,847,000)
Accumulated other comprehensive income	(25,660,000)	(22,165,000)
Total shareholders' equity	359,436,000	357,431,000
Total liabilities and shareholders' equity	<u>\$1,015,614,000</u>	<u>\$991,118,000</u>

See notes to consolidated financial statements.

**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF INCOME**

	For the years ended December 31,		
	<u>2001</u>	<u>2000</u>	<u>1999</u>
Net sales	\$1,072,175,000	\$1,106,127,000	\$977,209,000
Costs and expenses			
Cost of sales	(759,914,000)	(768,783,000)	(676,607,000)
Selling, general and administrative	(220,257,000)	(220,690,000)	(199,250,000)
Operating income	92,004,000	116,654,000	101,352,000
Interest expense	(26,368,000)	(31,401,000)	(23,339,000)
Other income (expense), net	(1,182,000)	(839,000)	1,296,000
Income before income taxes	64,454,000	84,414,000	79,309,000
Income taxes—Note F	(17,864,000)	(26,759,000)	(24,926,000)
Income from continuing operations	46,590,000	57,655,000	54,383,000
Income from discontinued operations, net of taxes	983,000	726,000	3,154,000
Cumulative effect of change in accounting		(844,000)	
Net income	<u>\$ 47,573,000</u>	<u>\$ 57,537,000</u>	<u>\$ 57,537,000</u>
Basic net income per share			
Income from continuing operations	\$ 1.03	\$ 1.27	\$ 1.19
Income from discontinued operations, net of taxes	.02	.02	.07
Cumulative effect of change in accounting		(.02)	
Net income	<u>\$ 1.05</u>	<u>\$ 1.27</u>	<u>\$ 1.26</u>
Diluted net income per share			
Income from continuing operations	\$ 1.03	\$ 1.27	\$ 1.18
Income from discontinued operations, net of taxes	.02	.02	.07
Cumulative effect of change in accounting		(.02)	
Net income*	<u>\$ 1.05</u>	<u>\$ 1.26</u>	<u>\$ 1.25</u>

\* amounts may not add to total due to rounding

See notes to consolidated financial statements.



**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**

	For the years ended December 31,		
	<u>2001</u>	<u>2000</u>	<u>1999</u>
Net income	\$47,573,000	\$57,537,000	\$57,537,000
Other comprehensive income (loss)—Foreign currency translation adjustment, net	<u>(3,495,000)</u>	<u>(4,857,000)</u>	<u>(6,590,000)</u>
Comprehensive income	<u>\$44,078,000</u>	<u>\$52,680,000</u>	<u>\$50,947,000</u>

See notes to consolidated financial statements.

**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	For the years ended December 31,		
	<u>2001</u>	<u>2000</u>	<u>1999</u>
Operating activities			
Net income	\$ 47,573,000	\$ 57,537,000	\$ 57,537,000
Adjustments to reconcile net income to net cash provided by operating activities:			
Cumulative effect of change in accounting		844,000	
Depreciation	20,036,000	19,482,000	17,057,000
Amortization	10,222,000	9,575,000	8,740,000
Provision for doubtful accounts	1,087,000	881,000	2,098,000
Deferred income taxes	(458,000)	(220,000)	983,000
Other, net	274,000	(102,000)	365,000
Changes in operating assets and liabilities, net of effects from acquisitions of companies			
Accounts receivable	11,047,000	(10,012,000)	(10,162,000)
Inventories	10,085,000	7,522,000	(29,634,000)
Prepaid expenses	(3,961,000)	(120,000)	(4,020,000)
Accounts payable	(10,372,000)	(9,567,000)	12,490,000
Accrued liabilities	5,564,000	(10,702,000)	46,000
Income taxes	4,016,000	(728,000)	2,156,000
Net cash provided by operating activities	<u>95,113,000</u>	<u>64,390,000</u>	<u>57,656,000</u>
Investing activities			
Purchases of properties and equipment	(18,424,000)	(22,288,000)	(23,404,000)
Principal extensions under lease financing agreements	(174,457,000)	(143,850,000)	(131,791,000)
Principal collections under lease financing agreements	148,375,000	122,412,000	108,004,000
Payments for purchases of companies, net of cash acquired, excludes \$15,715,000 of common stock issued in 1999	(19,657,000)	(24,401,000)	(57,932,000)
Other, net	4,953,000	3,297,000	27,000
Net cash used for investing activities	<u>(59,210,000)</u>	<u>(64,830,000)</u>	<u>(105,096,000)</u>
Financing activities			
Increase (reduction) in short-term borrowings, net	(91,696,000)	61,482,000	78,768,000
Increase (reduction) in long-term borrowings	105,130,000	(4,961,000)	(2,883,000)
Purchases of treasury stock	(13,155,000)	(17,279,000)	(3,592,000)
Cash dividends paid to shareholders	(35,150,000)	(34,534,000)	(33,574,000)
Other, net	2,294,000	524,000	2,169,000
Net cash provided by financing activities	<u>(32,577,000)</u>	<u>5,232,000</u>	<u>40,888,000</u>
Increase (decrease) in cash and cash equivalents	3,326,000	4,792,000	(6,552,000)
Cash and cash equivalents at beginning of year	13,556,000	8,764,000	15,316,000
Cash and cash equivalents at end of year	<u>\$ 16,882,000</u>	<u>\$ 13,556,000</u>	<u>\$ 8,764,000</u>

See notes to consolidated financial statements.

**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**NOTE A —SIGNIFICANT ACCOUNTING POLICIES**

**Principles of consolidation:** The consolidated financial statements include the accounts of Federal Signal Corporation and all of its subsidiaries. All significant intercompany balances and transactions have been eliminated.

**Cash equivalents:** The company considers all highly liquid investments with a maturity of three-months or less, when purchased, to be cash equivalents.

**Inventories:** Inventories are stated at the lower of cost or market. At December 31, 2001 and 2000, approximately 48% and 52%, respectively, of the company's inventories are costed using the LIFO (last-in, first-out) method. The remaining portion of the company's inventories is costed using the FIFO (first-in, first-out) method.

**Properties and depreciation:** Properties and equipment are stated at cost. Depreciation, for financial reporting purposes, is computed principally on the straight-line method over the estimated useful lives of the assets.

**Intangible assets:** Intangible assets principally consist of costs in excess of fair values of net assets acquired in purchase transactions and are generally being amortized over forty years. Accumulated amortization aggregated \$49,929,000 and \$41,876,000 at December 31, 2001 and 2000, respectively. The company makes regular periodic assessments to determine if factors are present which indicate that an impairment of intangibles may exist. If factors indicate that an impairment may exist, the company makes an estimate of the related future cash flows. The undiscounted cash flows, excluding interest, are compared to the related book value including the intangibles. If such cash flows are less than the book value, the company makes an estimate of the fair value of the related business to determine the amount of impairment loss, if any, to be recorded as a reduction of the recorded intangibles.

**Use of estimates:** The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

**Financial instruments:** The company enters into agreements (derivative financial instruments) to manage the risks associated with interest rates and foreign exchange rates. The company does not actively trade such instruments nor enter into such agreements for speculative purposes. The company principally utilizes two types of derivative financial instruments: 1) interest rate swaps to manage its interest rate risk, and 2) foreign currency forward exchange contracts to manage risks associated with sales and purchase commitments denominated in foreign currencies.

On the date a derivative contract is entered into, the company designates the derivative as one of the following types of hedging instruments and accounts for the derivative as follows:

*Fair Value Hedge:* A hedge of a recognized asset or liability or an unrecognized firm commitment is declared as a fair value hedge. For fair value hedges, both the effective and ineffective portions of the changes in the fair value of the derivative, along with the gain or loss on the hedged item that is attributable to the hedged risk, are recorded in earnings and reported in the consolidated statements of income on the same line as the hedged item.

*Cash Flow Hedge:* A hedge of a forecasted transaction or of the variability of cash flows to be received or paid related to a recognized asset or liability is declared as a cash flow hedge. The effective portion of the change in the fair value of a derivative that is declared as a cash flow hedge is recorded in accumulated other comprehensive income. When the hedged item impacts the income statement, the gain or loss included in accumulated other comprehensive income is reported on the same line in the consolidated statements of income as the hedged item. In addition, both the fair value of changes excluded from the company's effectiveness assessments and the ineffective portion of the changes in the fair value of derivatives used as cash flow hedges are reported in selling, general and administrative expenses in the consolidated statements of income.

**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The company formally documents its hedge relationships, including identification of the hedging instruments and the hedged items, as well as its risk management objectives and strategies for undertaking the hedge transaction. Derivatives are recorded in the consolidated balance sheets at fair value in other assets and other liabilities. This process includes linking derivatives that are designated as hedges of specific forecasted transactions. The company also formally assesses, both at inception and at least quarterly thereafter, whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in either the fair value or cash flows of the hedged item. If it is determined that a derivative ceases to be a highly effective hedge, or if the anticipated transaction is no longer likely to occur, the company discontinues hedge accounting, and any deferred gains or losses are recorded in selling, general and administrative expenses. Amounts related to terminated interest rate swaps are deferred and amortized as an adjustment to interest expense over the original period of interest exposure, provided the designated liability continues to exist or is probable of occurring.

**Revenue recognition:** Effective January 1, 2000, the company changed its method of accounting for recognizing revenues as required by Staff Accounting Bulletin No. 101 issued by the Securities and Exchange Commission. Effective with the change, the company recognizes revenues for product sales based upon the respective terms of delivery for each sale agreement. In years prior to 2000, the company recognized substantially all of its revenues for product sales as products were shipped, as this method was then in compliance with generally accepted accounting principles. See Note P.

**Income per share:** Basic net income per share is calculated using income available to common shareholders (net income) divided by the weighted average number of common shares outstanding during the year. Diluted net income per share is calculated in the same manner except that the denominator is increased to include the weighted number of additional shares that would have been outstanding had dilutive stock option shares been actually issued. The company uses the treasury stock method to calculate dilutive shares. See Note N for the calculation of basic and diluted net income per share.

**NOTE B—INVENTORIES**

Inventories at December 31 are summarized as follows:

	<u>2001</u>	<u>2000</u>
Finished goods	\$ 50,148,000	\$ 45,636,000
Work in process	39,258,000	45,127,000
Raw materials	<u>63,435,000</u>	<u>66,856,000</u>
Total inventories	<u>\$152,841,000</u>	<u>\$157,619,000</u>

If the company had used the first-in, first-out cost method exclusively, which approximates replacement cost, inventories would have aggregated \$161,913,000 and \$166,956,000 at December 31, 2001 and 2000, respectively.

**NOTE C—PROPERTIES AND EQUIPMENT**

A comparative summary of properties and equipment at December 31 is as follows:

	<u>2001</u>	<u>2000</u>
Land	\$ 5,606,000	\$ 5,291,000
Buildings and improvements	53,854,000	51,755,000
Machinery and equipment	198,047,000	184,990,000
Accumulated depreciation	<u>(143,765,000)</u>	<u>(129,440,000)</u>
Total properties and equipment	<u>\$ 113,742,000</u>	<u>\$ 112,596,000</u>

**NOTE D—LEASE FINANCING AND OTHER RECEIVABLES**

As an added service to its customers, the company is engaged in financial services activities. These activities primarily consist of providing long-term financing for certain U.S. customers purchasing vehicle-based products from the company's Environmental Products and Fire Rescue groups. A substantial portion of these receivables



# FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

is due from municipalities. Financing is provided through sales-type lease contracts with terms that range typically two to ten years.

At the inception of the lease, the company records the product sales price and related costs and expenses of the sale. Financing revenues are included in income over the life of the lease. The amounts recorded as lease financing receivables represent amounts equivalent to normal selling prices less subsequent customer payments.

Lease financing and other receivables will become due as follows: \$83,848,000 in 2002, \$38,677,000 in 2003, \$32,550,000 in 2004, \$25,268,000 in 2005, \$18,028,000 in 2006 and \$41,754,000 thereafter. At December 31, 2001 and 2000, unearned finance revenue on these leases aggregated \$36,134,000 and \$34,354,000, respectively.

### NOTE E—DEBT

Short-term borrowings at December 31 consisted of the following:

	<u>2001</u>	<u>2000</u>
Commercial paper	\$203,082,000	\$299,073,000
Notes payable	30,798,000	32,027,000
Current maturities of long-term debt	<u>8,886,000</u>	<u>6,196,000</u>
Total short-term borrowings	<u>\$242,766,000</u>	<u>\$337,296,000</u>

Of the above amounts, \$213,917,000 and \$191,483,000 are classified as financial services activities borrowings at December 31, 2001 and 2000, respectively.

Long-term borrowings at December 31 consisted of the following:

	<u>2001</u>	<u>2000</u>
6.79% unsecured note payable in annual installments of \$10,000,000 in 2007-2011	\$ 50,000,000	\$ 50,000,000
6.37% unsecured note payable in annual installments of \$10,000,000 in 2004-2008	50,000,000	
6.60% unsecured note payable in annual installments of \$7,143,000 in 2005-2011	50,000,000	
5.49% unsecured note payable in 2006	65,000,000	
7.59% unsecured note payable in 2002	8,000,000	12,000,000
7.99% unsecured note payable in 2004	15,000,000	15,000,000
Floating rate (3.28% at December 31, 2001) secured note payable in monthly installments ending in 2004	2,207,000	2,889,000
Notes payable backed by long-term credit lines		50,000,000
Other	<u>1,357,000</u>	<u>1,756,000</u>
	241,564,000	131,645,000
Less current maturities	<u>8,886,000</u>	<u>6,196,000</u>
Total long-term borrowings	<u>\$232,678,000</u>	<u>\$125,449,000</u>

Aggregate maturities of long-term debt amount to approximately \$8,886,000 in 2002, \$1,071,000 in 2003, \$25,609,000 in 2004, \$17,754,000 in 2005, \$82,367,000 in 2006, and \$105,877,000 thereafter. The fair values of borrowings are not substantially different from recorded amounts.

The 6.79%, 6.37%, 6.60% and 5.49% notes contain covenants relating to a maximum debt-capital ratio and minimum net worth. The 7.59% and 7.99% notes contain various restrictions relating to maintenance of minimum working capital, payments of cash dividends, purchases of the company's stock, and principal and interest of any subordinated debt. At December 31, 2001, all of the company's retained earnings were free of any restrictions and the company was in compliance with the financial covenants of its debt agreements.

The company paid interest of \$26,097,000 in 2001, \$31,780,000 in 2000 and \$24,888,000 in 1999. Weighted average interest rates on short-term borrowings were 2.65% and 7.6% at December 31, 2001 and 2000,

# FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

respectively. See Note H regarding the company's utilization of derivative financial instruments relating to outstanding debt.

At December 31, 2001, the company had unused credit lines of \$350,000,000, of which \$216,000,000 expires June 13, 2002 and \$134,000,000 expires June 17, 2004. Commitment fees, paid in lieu of compensating balances, were insignificant.

### NOTE F—INCOME TAXES

The provisions for income taxes consisted of the following:

	<u>2001</u>	<u>2000</u>	<u>1999</u>
<b>Current:</b>			
Federal	\$11,257,000	\$19,119,000	\$17,942,000
Foreign	5,411,000	5,036,000	3,759,000
State and local	<u>1,654,000</u>	<u>2,824,000</u>	<u>2,242,000</u>
	18,322,000	26,979,000	23,943,000
<b>Deferred:</b>			
Federal	(826,000)	426,000	291,000
Foreign	140,000	(424,000)	347,000
State and local	<u>228,000</u>	<u>(222,000)</u>	<u>345,000</u>
	(458,000)	(220,000)	983,000
Total income taxes	<u>\$17,864,000</u>	<u>\$26,759,000</u>	<u>\$24,926,000</u>

Differences between the statutory federal income tax rate and the effective income tax rate are summarized below:

	<u>2001</u>	<u>2000</u>	<u>1999</u>
Statutory federal income tax rate	35.0%	35.0%	35.0%
State income taxes, net of federal tax benefit	1.9	2.0	2.1
Tax-exempt interest	(4.7)	(3.3)	(3.2)
Other, net	<u>(4.5)</u>	<u>(2.0)</u>	<u>(2.5)</u>
Effective income tax rate	<u>27.7%</u>	<u>31.7%</u>	<u>31.4%</u>

The company had net current deferred income tax benefits of \$4,780,000 and \$2,877,000 recorded in the balance sheet at December 31, 2001 and 2000, respectively. The company paid income taxes of \$15,193,000 in 2001, \$24,481,000 in 2000 and \$21,933,000 in 1999.

Net deferred tax liabilities (assets) comprised the following at December 31, 2001: Depreciation and amortization—\$36,371,000; revenue recognized on custom manufacturing contracts—\$2,535,000; accrued pension benefits—\$4,507,000; accrued expenses deductible in future periods—(\$19,305,000); net operating loss carryforwards of subsidiaries—(\$4,271,000); valuation allowance for net operating loss carryforwards—\$4,271,000; and other—\$392,000.

Net deferred tax liabilities (assets) comprised the following at December 31, 2000: Depreciation and amortization—\$32,748,000; revenue recognized on custom manufacturing contracts—\$3,406,000; accrued pension benefits—\$6,002,000; accrued expenses deductible in future periods—\$(17,337,000); net operating loss carryforwards of subsidiaries—(\$4,412,000); valuation allowance for net operating loss carryforwards—\$4,412,000; and other—\$139,000.

The majority of the net operating loss carryforwards of subsidiaries have no expiration dates.

**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Income before taxes consisted of the following:

	<u>2001</u>	<u>2000</u>	<u>1999</u>
United States	\$48,335,000	\$71,734,000	\$65,753,000
Non-U.S.	<u>16,119,000</u>	<u>12,680,000</u>	<u>13,556,000</u>
	<u>\$64,454,000</u>	<u>\$84,414,000</u>	<u>\$79,309,000</u>

**NOTE G—POSTRETIREMENT BENEFITS**

The company and its subsidiaries sponsor a number of defined benefit retirement plans covering certain of its salaried employees and hourly employees not covered by plans under collective bargaining agreements. Benefits under these plans are primarily based on final average compensation and years of service as defined within the provisions of the individual plans. The company also participates in several multiemployer retirement plans that provide defined benefits to employees under certain collective bargaining agreements.

**U.S. Benefit Plans**

The components of net periodic pension (credit) are summarized as follows:

	<u>2001</u>	<u>2000</u>	<u>1999</u>
Company-sponsored plans			
Service cost	\$ 2,597,000	\$ 2,251,000	\$ 3,036,000
Interest cost	4,635,000	4,537,000	4,313,000
Expected return on plan assets	(9,020,000)	(8,961,000)	(8,165,000)
Amortization of transition amount	(230,000)	(230,000)	(230,000)
Other	<u>666,000</u>	<u>(228,000)</u>	<u>(8,000)</u>
	(1,352,000)	(2,631,000)	(1,054,000)
Multiemployer plans	<u>534,000</u>	<u>636,000</u>	<u>690,000</u>
Net periodic pension (credit)	<u>\$ (818,000)</u>	<u>\$ (1,995,000)</u>	<u>\$ (364,000)</u>

The following summarizes the changes in the projected benefit obligation and plan assets, the funded status of the company-sponsored plans and the major assumptions used to determine these amounts.

	<u>2001</u>	<u>2000</u>
Projected benefit obligation, January 1	\$60,656,000	\$52,024,000
Service cost	2,597,000	2,251,000
Interest cost	4,635,000	4,537,000
Actuarial (gain)loss	3,972,000	6,369,000
Benefits paid	(5,632,000)	(3,686,000)
Curtailment credit	<u>(839,000)</u>	<u>(839,000)</u>
Projected benefit obligation, December 31	<u>\$66,228,000</u>	<u>\$60,656,000</u>
Fair value of plan assets, January 1	\$68,078,000	\$69,008,000
Adjustment to prior year actual return	(612,000)	1,805,000
Actual return on plan assets	(1,647,000)	951,000
Benefits paid	<u>(5,632,000)</u>	<u>(3,686,000)</u>
Fair value of plan assets, December 31	<u>\$60,187,000</u>	<u>\$68,078,000</u>
Funded status of plan, December 31	\$ (6,041,000)	\$ 7,422,000
Unrecognized actuarial (gain)loss	18,285,000	3,708,000
Unrecognized prior service cost	(88,000)	(96,000)
Unrecognized net transition obligation	<u>(848,000)</u>	<u>(1,078,000)</u>
Net amount recognized as prepaid benefit cost in the balance sheet	<u>\$11,308,000</u>	<u>\$ 9,956,000</u>

**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Plan assets consist principally of a broadly diversified portfolio of equity securities and corporate and U.S. government obligations. Included in plan assets at December 31, 2001 and 2000 were 653,400 shares of the company's common stock valued at \$14,551,000 and \$12,823,000, respectively. Dividends paid on the company's common stock to the pension trusts aggregated \$506,000 and \$497,000, respectively, for the years ended December 31, 2001 and 2000. The company curtailed the pension benefits of employees of a discontinued business in 2000; the resulting credit of \$839,000 was reported as a component of income from discontinued operations.

The following significant assumptions were used in determining pension costs for the three-year period ended December 31, 2001:

	<u>2001</u>	<u>2000</u>	<u>1999</u>
Discount rate	7.7%	8.1%	6.8%
Rate of increase in compensation levels	4%	4%	4%
Expected long-term rate of return on plan assets	12%	12%	12%

The weighted average discount rates used in determining the actuarial present value of all pension obligations at December 31, 2001 and 2000 were 7.3% and 7.7%, respectively. The discount rate at the end of the year is one of the significant assumptions used in determining pension costs for the following year. In January 2002, the company established its other significant cost assumptions for its U.S. benefit plans for 2002 as follows: expected long-term rate of return on plan assets—9.5%; rate of increase in compensation levels—3.5%. The company expects that the change in these assumptions will increase 2002 pension costs by approximately \$2,800,000 compared to 2001.

The company also sponsors a number of defined contribution pension plans covering a majority of its employees. Participation in the plans is at each employee's election. Company contributions to these plans are based on a percentage of employee contributions. The cost of these plans, including the plans of companies acquired during the three-year period ended December 31, 2001, was \$5,252,000 in 2001, \$4,886,000 in 2000 and \$3,993,000 in 1999.

The company also provides certain medical, dental and life benefits to certain eligible retired employees. These benefits are funded when the claims are incurred. Participants generally become eligible for these benefits at age 60 after completing at least fifteen years of service. The plan provides for the payment of specified percentages of medical and dental expenses reduced by any deductible and payments made by other primary group coverage and government programs. The company will continue to reduce the percentage of the cost of benefits that it will pay since the company's future costs are limited to 150% of the 1992 cost. Accumulated postretirement benefit liabilities of \$3,988,000 and \$3,890,000 at December 31, 2001 and 2000, respectively, were fully accrued. The net periodic postretirement benefit costs have not been significant during the three-year period ended December 31, 2001.

**Non-U.S. Benefit Plan**

A wholly-owned subsidiary sponsors a defined benefit plan for substantially all of its employees in the United Kingdom. Benefits under this plan are based on final compensation and years of service as defined within the provisions of the plan.



# FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Net periodic pension credits during the three-year period ended December 31, 2001 were not significant. The following summarizes the changes in the projected benefit obligation and plan assets, the funded status of the company-sponsored plans and the major assumptions used to determine these amounts.

	<u>2001</u>	<u>2000</u>
Projected benefit obligation, October 1	\$33,649,000	\$37,068,000
Service cost	468,000	542,000
Interest cost	2,101,000	2,240,000
Actuarial (gain)loss	(338,000)	(630,000)
Employee contributions	90,000	102,000
Benefits paid	(1,766,000)	(1,766,000)
Increase (decrease) due to translation	(12,000)	(3,907,000)
Projected benefit obligation, September 30	<u>\$34,192,000</u>	<u>\$33,649,000</u>
Fair value of plan assets, October 1	\$38,193,000	\$39,540,000
Actual return on plan assets	(2,815,000)	4,372,000
Company contribution	381,000	397,000
Employee contribution	90,000	102,000
Benefits paid	(1,766,000)	(1,766,000)
Plan expenses	(124,000)	(135,000)
Increase (decrease) due to translation	(78,000)	(4,317,000)
Fair value of plan assets, September 30	<u>\$33,881,000</u>	<u>\$38,193,000</u>
Funded status of plan, September 30	\$ (311,000)	\$ 4,544,000
Unrecognized actuarial loss	<u>6,438,000</u>	<u>749,000</u>
Net amount recognized as prepaid benefit cost in the balance sheet	<u>\$ 6,127,000</u>	<u>\$ 5,293,000</u>

Plan assets consist principally of a broadly diversified portfolio of equity securities, U.K. government obligations and fixed interest securities. The following significant assumptions were used in determining pension costs for the three-year period ended December 31, 2001:

	<u>2001</u>	<u>2000</u>	<u>1999</u>
Discount rate	6.5%	6.5%	6%
Rate of increase in compensation levels	3%	3%	3.5%
Expected long-term rate of return on plan assets	8.5%	8.5%	8%

The weighted average discount rate used in determining the actuarial present value of all pension obligations at September 30, 2001 and 2000 were 6.25% and 6.5%, respectively.

## NOTE H—DERIVATIVE FINANCIAL INSTRUMENTS

In June 1998, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards (SFAS) No. 133, "Accounting for Derivative Instruments and Hedging Activity." Beginning January 1, 2001, the standard as amended, requires that all derivative financial instruments be reported on the balance sheet at their respective fair values. Changes in fair value are recognized either in earnings or equity, depending on the nature of the underlying exposure being hedged and how effective a derivative is at offsetting price movements in the underlying exposure.

As required, the company adopted SFAS 133 on January 1, 2001. Nearly all of the company's existing derivative positions qualified for hedge accounting under SFAS 133; the effect of adoption was not material. The company made no substantive changes to its risk management strategy as a result of adopting SFAS 133. Derivatives documentation policies comply with the standard's requirements.

To manage interest costs, the company utilizes interest rate swaps in combination with its funded debt. Interest rate swaps entered into in 2001 effectively convert fixed rate debt to variable rate debt, which is generally lower than fixed rate debt over the long term. At December 31, 2001, the company had agreements with financial

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

institutions having notional amounts aggregating \$105,000,000. These interest rate swap agreements are accounted for as fair value hedges and are 100% effective; no amounts were excluded from the assessment of hedge effectiveness.

At December 31, 2001, the company also had an agreement with a financial institution to swap interest rates in which the company pays interest at a fixed rate of 5.13% and receives interest at the three-month LIBOR rate. This agreement is based on a notional amount of \$25,000,000 and expires in February 2008; the agreement allows the counterparty to cancel the swap at three-month intervals. If at any three-month extension date the counterparty decides not to extend the swap, it is terminated and no further obligations are due by either party. This interest rate swap agreement did not qualify as a hedge; changes in fair value are reflected in income in each accounting period.

The fair values of interest rate and currency swaps are based on quotes from financial institutions. The following table summarizes the company's interest rate swaps at December 31, 2001 and 2000:

	2001		2000	
	<u>Total</u>	<u>Fair value</u>	<u>Total</u>	<u>Fair value</u>
Pay fixed, receive variable				
Notional amount	\$ 25.0	\$(1.4)	\$25.0	\$(.2)
Average pay rate	5.1%		5.1%	
Average receive rate	2.0%		6.8%	
Receive fixed, pay variable				
Notional amount	\$105.0	\$(2.5)		
Average pay rate	3.2%			
Average receive rate	6.1%			

In November 2001, the company terminated an interest rate swap; the termination benefit of \$2,496,000 has been deferred and is being amortized as an offset to interest expense over the life of the underlying debt.

Foreign currency swaps were not significant in 2001 or 2000.

#### NOTE I—STOCK-BASED COMPENSATION

The company's stock benefit plans, approved by the company's shareholders, authorize the grant of benefit shares or units to key employees and directors. The plan approved in 1988 authorized, until May 1998, the grant of up to 2,737,500 benefit shares or units (as adjusted for subsequent stock splits and dividends). The plan approved in 1996 and amended in 1999 authorizes the grant of up to 2,500,000 benefit shares or units until April 2006. These share or unit amounts exclude amounts that were issued under predecessor plans. Benefit shares or units include incentive and non-incentive stock options, stock awards and other stock units. The plan approved in December 2001 authorizes the grant of up to 1,000,000 benefit shares until December 2011. No grants were made for this plan in 2001.

Stock options are primarily granted at the fair market value of the shares on the date of grant and become exercisable one year after grant at a rate of one-half annually and are exercisable in full on the second anniversary date. All options and rights must be exercised within ten years from date of grant. At the company's discretion, vested stock option holders are permitted to elect an alternative settlement method in lieu of purchasing common stock at the option price. The alternative settlement method permits the employee to receive, without payment to the company, cash, shares of common stock or a combination thereof equal to the excess of market value of common stock over the option purchase price.

The company has elected to follow Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" (APB 25). Under APB 25, no compensation expense is recognized when the exercise price of stock options equals the market price of the underlying stock on the date of grant.

**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Stock option activity for the three-year period ended December 31, 2001 follows (number of shares in 000's, prices in dollars per share):

	Option shares			Weighted average price (\$)		
	2001	2000	1999	2001	2000	1999
Outstanding at beginning of year	2,178	2,312	2,025	19.84	19.29	18.80
Granted	519	63	489	21.24	18.65	18.57
Canceled or expired	(88)	(36)	(35)	19.93	21.74	21.99
Exercised	(286)	(161)	(167)	14.09	11.05	10.65
Outstanding at end of year	<u>2,323</u>	<u>2,178</u>	<u>2,312</u>	20.86	19.84	19.29
Exercisable at end of year	<u>1,602</u>	<u>1,588</u>	<u>1,468</u>	21.10	19.95	18.71

For options outstanding at December 31, 2001, the number (in thousands), weighted average exercise prices in dollars per share, and weighted average remaining terms were as follows:

	Period in which options were granted					Aggregate
	01-00	99-98	97-96	95-94	93-92	
Number outstanding	542	620	739	156	266	2,323
Exercise price range (\$):						
High	22.31	26.13	25.38	24.38	20.62	26.13
Low	15.56	14.94	20.44	16.00	12.09	12.09
Weighted average:						
Exercise price (\$)	21.13	20.07	22.57	19.80	18.00	20.86
Remaining term (years)	9	7	5	3	1	6

The weighted average fair value per share of options granted was \$5.33 in 2001, \$4.86 in 2000 and \$3.58 in 1999. The fair value of options was estimated at the grant date using a Black-Scholes option pricing model with the following weighted average assumptions: risk free interest rates of 4.4% in 2001, 5.0% in 2000 and 6.4% in 1999; dividend yield of 3.5% in 2001, 3.9% in 2000, and 4.8% in 1999; market volatility of the company's common stock of .28 in 2001, .27 in 2000 and .23 in 1999; and a weighted average expected life of the options of approximately 8 years for 2001 and 2000 and 7 years for 1999. For purposes of pro forma disclosure, the estimated fair value of the options is amortized to expense over the option's vesting period. On a pro forma basis, the company's net income would have been \$46,494,000 or \$1.02 per diluted share for the year ended December 31, 2001, \$56,800,000 or \$1.25 per diluted share for the year ended December 31, 2000 and \$56,523,000 or \$1.23 diluted per share for the year ended December 31, 1999. The calculated pro forma effect on 1999-2001 net income and net income per share amounts are not necessarily indicative of future amounts until application of the disclosure rules are applied to all outstanding, nonvested awards.

The intent of the Black-Scholes option valuation model is to provide estimates of fair values of traded options that have no vesting restrictions and are fully transferable. Option valuation models require the use of highly subjective assumptions including expected stock price volatility. The company has utilized the Black-Scholes method to produce the pro forma disclosures required under Statement of Financial Accounting Standards No. 123, "Accounting and Disclosure of Stock-Based Compensation". In management's opinion, existing valuation models do not necessarily provide a reliable single measure of the fair value of its employee stock options because the company's employee stock options have significantly different characteristics from those of traded options and the assumptions used in applying option valuation methodologies, including the Black-Scholes model, are highly subjective.

Stock award shares are granted to employees at no cost. Awards primarily vest at the rate of 25% annually commencing one year from the date of award, provided the recipient is still employed by the company on the vesting date. The cost of stock awards, based on the fair market value at the date of grant, is being charged to expense over the four-year vesting period. The company granted stock award shares of 92,500 in 2001, 69,500 in 2000 and 65,000 in 1999. The fair values of these shares were \$1,677,000, \$1,108,000, and \$1,712,000, respectively. Compensation expense related to stock award shares recorded during these periods was \$1,345,000, \$1,499,000 and \$1,308,000, respectively.

**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Under the 1988 plan, no benefit shares or units were available for future grant during the three-year period ending December 31, 2001. Under the 1996 plan, the following benefit shares or units were available for future grant: 410,000 at December 31, 2001, 937,000 at December 31, 2000 and 1,040,000 at December 31, 1999. Under the 2001 plan, 1,000,000 benefit shares were available for future grant as of December 31, 2001.

**NOTE J—SHAREHOLDERS' EQUITY**

The company has 90,000,000 authorized shares of common stock, \$1 par value and 800,000 authorized and unissued shares of preference stock, \$1 par value.

The changes in shareholders' equity for each of the three years in the period ended December 31, 2001 were as follows:

	<u>Common stock par value</u>	<u>Capital in excess of par value</u>	<u>Retained earnings</u>	<u>Treasury stock</u>	<u>Deferred stock awards</u>	<u>Accumulated other comprehensive income</u>
Balance at December 31, 1998—						
46,668,000 shares issued	\$46,668,000	\$63,461,000	\$253,366,000	\$(29,161,000)	\$(1,834,000)	\$(10,718,000)
Net income			57,537,000			
Cash dividends declared			(33,952,000)			
Exercise of stock options:						
Cash proceeds	147,000	1,472,000				
Exchange of shares	21,000	99,000		(120,000)		
Stock awards granted	65,000	1,647,000			(1,712,000)	
Tax benefits related to stock compensation plans		363,000				
Retirement of treasury stock	(12,000)	(280,000)		292,000		
Purchases of 141,000 shares of treasury stock				(3,582,000)		
Issued 706,000 shares from treasury for purchases of companies				15,715,000		
Amortization of deferred stock awards					1,308,000	
Foreign currency translation adjustment, net						(6,590,000)
Other				(167,000)		
Balance at December 31, 1999—						
46,889,000 shares issued	46,889,000	66,762,000	276,951,000	(17,023,000)	(2,238,000)	(17,308,000)
Net income			57,537,000			
Cash dividends declared			(34,503,000)			
Exercise of stock options:						
Cash proceeds	82,000	961,000				
Exchange of shares	79,000	697,000		(776,000)		
Stock awards granted	69,000	1,039,000			(1,108,000)	
Tax benefits related to stock compensation plans		302,000				
Retirement of treasury stock	(52,000)	(1,068,000)		1,120,000		
Purchases of 988,000 shares of treasury stock				(17,279,000)		
Amortization of deferred stock awards					1,499,000	
Foreign currency translation adjustment, net						(4,857,000)
Other				(344,000)		
Balance at December 31, 2000—						
47,067,000 shares issued	47,067,000	68,693,000	299,985,000	(34,302,000)	(1,847,000)	(22,165,000)
Net income			47,573,000			
Cash dividends declared			(35,352,000)			
Exercise of stock options:						
Cash proceeds	211,000	2,835,000				
Exchange of shares	75,000	909,000		(984,000)		
Stock awards granted	93,000	1,834,000			(1,927,000)	
Tax benefits related to stock compensation plans		402,000				
Retirement of treasury stock	(56,000)	(1,258,000)		1,314,000		
Purchases of 579,000 shares of treasury stock				(13,155,000)		
Issued 93,000 shares from treasury for purchases of companies				1,900,000		
Amortization of deferred stock awards					1,345,000	
Foreign currency translation adjustment, net						(3,495,000)
Other	(12,000)	(238,000)		(259,000)	250,000	
Balance at December 31, 2001—						
47,378,000 shares issued	<u>\$47,378,000</u>	<u>\$73,177,000</u>	<u>\$312,206,000</u>	<u>\$(45,486,000)</u>	<u>\$(2,179,000)</u>	<u>\$(25,660,000)</u>

In July 1998, the company declared a dividend distribution of one preferred share purchase right on each share of common stock outstanding on and after August 18, 1998. The rights are not exercisable until the rights

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

distribution date, defined as the earlier of: 1) the tenth day following a public announcement that a person or group of affiliated or associated persons acquired or obtained the right to acquire beneficial ownership of 20% or more of the outstanding common stock or 2) the tenth day following the commencement or announcement of an intention to make a tender offer or exchange offer, the consummation of which would result in the beneficial ownership by a person or group of 30% or more of such outstanding common shares. Each right, when exercisable, entitles the holder to purchase from the company one one-hundredth of a share of Series A Preferred stock of the company at a price of \$100 per one one-hundredth of a preferred share, subject to adjustment. The company is entitled to redeem the rights at \$.10 per right, payable in cash or common shares, at any time prior to the expiration of twenty days following the public announcement that a 20% position has been acquired. In the event that the company is acquired in a merger or other business combination transaction or 50% or more of its consolidated assets or earning power is sold, proper provision will be made so that each holder of a right will thereafter have the right to receive, upon the exercise thereof at the then current exercise price of a right, that number of shares of common stock of the acquiring company which at the time of such transaction would have a market value of two times the exercise price of the right. The rights expire on August 18, 2008 unless earlier redeemed by the company. Until exercised, the holder of a right, as such, will have no rights as a shareholder, including, without limitation, the right to vote or to receive dividends.

#### NOTE K—ACQUISITIONS

During the three-year period ended December 31, 2001, the company made the following acquisitions, principally all for cash, except as otherwise noted. In March 2001, the company acquired all of the assets of Athey Products Corporation from bankruptcy proceedings. Athey was a primary competitor to Environmental Products Group's line of mechanical sweepers. Subsequent to the purchase, the company sold off substantially all assets of Athey. In September 2001, the company acquired a majority interest in Plastisol Holdings B.V., located in the Netherlands. Plastisol is a small manufacturer of cabs and bodies for fire apparatus using glassfiber reinforced polyester. The company also made two small Tool Group acquisitions during 2001. As a result of the 2001 acquisitions, the company recorded approximately \$5.8 million of working capital, \$9.4 million of fixed and other assets and \$12.1 million of costs in excess of fair value. The assigned values of these acquisitions are based upon preliminary estimates. In March 2000, the company acquired P.C.S. Company. Located near Detroit, Michigan, P.C.S. offers a comprehensive line of tooling components for the plastic injection mold and the die cast industries. The company also made a small Environmental Products Group acquisition during the first quarter of 2000. As a result of the 2000 acquisitions, the company recorded approximately \$9.9 million of working capital, \$3.8 million of fixed and other assets and \$10.7 million of costs in excess of fair value. In July 1999, the company acquired Clapp & Haney Tool Company for cash and stock. Located near Toledo, Ohio, Clapp & Haney is the leading U.S. manufacturer and marketer of polycrystalline diamond and cubic boron nitride consumable tooling. The company also made a small Safety Products Group acquisition during the early part of 1999. As a result of the 1999 acquisitions, the company recorded approximately \$4.9 million of working capital, \$12.2 million of fixed and other assets and \$56.1 million of costs in excess of fair value.

All of the acquisitions in the three-year period ended December 31, 2001 have been accounted for as purchases. Accordingly, the results of operations of the acquired companies have been included in the consolidated statements of income from the effective dates of the acquisitions. Assuming the 2001 and 2000 acquisitions occurred January 1, 2000, the company estimates that reported consolidated net sales would have increased by 1% in 2001 and increased by 2% in 2000, while reported net income would have changed less than 1% in both 2001 and 2000. The company made no significant changes to the values originally assigned to assets and liabilities recorded as a result of acquisitions made prior to 2001.

#### NOTE L—LEGAL PROCEEDINGS

The company is subject to various claims, other pending and possible legal actions for product liability and other damages and other matters arising out of the conduct of the company's business. 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 consolidated financial position or the results of operations.



## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

#### NOTE M—SEGMENT AND RELATED INFORMATION

The company has four continuing operating segments as defined under Statement of Financial Accounting Standards No. 131, “Disclosures about Segments of an Enterprise and Related Information”. Business units are organized under each segment because they share certain characteristics, such as technology, marketing, and product application, which create long-term synergies. The principal activities of the company’s operating segments are as follows:

**Environmental Products**—Environmental Products manufactures a variety of self-propelled street cleaning vehicles, vacuum loader vehicles, municipal catch basin/sewer cleaning vacuum trucks and water blasting equipment. Environmental Products sells primarily to municipal customers, contractors and government customers.

**Fire Rescue**—Fire Rescue manufactures chassis; fire trucks, including Class A pumpers, mini-pumpers and tankers; airport and other rescue vehicles, aerial access platforms and aerial ladder trucks. This group sells primarily to municipal customers, volunteer fire departments and government customers.

**Safety Products**—Safety Products produces a variety of visual and audible warning and signal devices; paging, local signaling, and building security, parking and access control systems; hazardous area lighting; and equipment for storage, transfer, use and disposal of flammable and hazardous materials. The group’s products are sold primarily to industrial, municipal and government customers.

**Tool**—Tool manufactures a variety of consumable tools which include die components for the metal stamping industry, a large selection of precision metal products for nonstamping needs and a line of precision cutting and grooving tools including polycrystalline diamond and cubic boron nitride products for superhard applications. The group’s products are sold predominately to industrial markets.

Net sales by operating segment reflect sales of products and services and financial revenues to external customers, as reported in the company’s consolidated statements of income. Intersegment sales are insignificant. The company evaluates performance based on operating income of the respective segment. Operating income includes all revenues, costs and expenses directly related to the segment involved. In determining operating segment income, neither corporate nor interest expenses are included. Operating segment depreciation expense, identifiable assets and capital expenditures relate to those assets that are utilized by the respective operating segment. Corporate assets consist principally of cash and cash equivalents, notes and other receivables and fixed assets. The accounting policies of each operating segment are the same as those described in the summary of significant accounting policies.

See Note K for a discussion of the company’s acquisition activity during the three-year period ended December 31, 2001.

Non-U.S. sales, which include sales exported from the U.S. and sales made by non-U.S. operations, aggregated \$267,531,000 in 2001, \$274,168,000 in 2000 and \$265,249,000 in 1999. Sales exported from the U.S. aggregated \$87,064,000 in 2001, \$102,402,000 in 2000 and \$104,940,000 in 1999.

# FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

A summary of the company's continuing operations by segment for the three-year period ended December 31, 2001 is as follows:

	<u>2001</u>	<u>2000</u>	<u>1999</u>
Net sales			
Environmental Products	\$ 280,708,000	\$ 255,269,000	\$247,097,000
Fire Rescue	373,428,000	389,311,000	310,008,000
Safety Products	256,261,000	267,062,000	261,940,000
Tool	161,778,000	194,485,000	158,164,000
Total net sales	<u>\$1,072,175,000</u>	<u>\$1,106,127,000</u>	<u>\$977,209,000</u>
Operating income			
Environmental Products	\$ 20,159,000	\$ 23,101,000	\$ 24,454,000
Fire Rescue	27,194,000	24,940,000	10,900,000
Safety Products	37,917,000	43,721,000	41,384,000
Tool	19,290,000	35,298,000	33,303,000
Corporate expense	(12,556,000)	(10,406,000)	(8,689,000)
Total operating income	92,004,000	116,654,000	101,352,000
Interest expense	(26,368,000)	(31,401,000)	(23,339,000)
Other income (expense)	(1,182,000)	(839,000)	1,296,000
Income before income taxes	<u>\$ 64,454,000</u>	<u>\$ 84,414,000</u>	<u>\$ 79,309,000</u>
Depreciation and amortization			
Environmental Products	\$ 5,510,000	\$ 5,030,000	\$ 4,609,000
Fire Rescue	5,199,000	5,304,000	5,299,000
Safety Products	9,316,000	8,978,000	8,925,000
Tool	9,418,000	8,907,000	6,115,000
Corporate	815,000	838,000	849,000
Total depreciation and amortization	<u>\$ 30,258,000</u>	<u>\$ 29,057,000</u>	<u>\$ 25,797,000</u>
Identifiable assets			
Manufacturing activities			
Environmental Products	\$ 153,406,000	\$ 149,622,000	\$143,320,000
Fire Rescue	203,749,000	201,960,000	200,950,000
Safety Products	209,036,000	220,867,000	227,073,000
Tool	176,580,000	175,884,000	155,095,000
Corporate	19,327,000	13,997,000	12,795,000
Total manufacturing activities	<u>762,098,000</u>	<u>762,330,000</u>	<u>739,233,000</u>
Financial services activities			
Environmental Products	72,581,000	69,055,000	66,096,000
Fire Rescue	166,539,000	145,175,000	125,165,000
Total financial services activities	<u>239,120,000</u>	<u>214,230,000</u>	<u>191,261,000</u>
Total identifiable assets	<u>\$1,001,218,000</u>	<u>\$ 976,560,000</u>	<u>\$930,494,000</u>
Additions to long-lived assets			
Environmental Products	\$ 13,754,000	\$ 5,574,000	\$ 3,241,000
Fire Rescue	6,466,000	4,958,000	4,598,000
Safety Products	4,105,000	5,333,000	13,496,000
Tool	19,373,000	19,857,000	70,243,000
Corporate	30,000	23,000	26,000
Total additions to long-lived assets	<u>\$ 43,728,000</u>	<u>\$ 35,745,000</u>	<u>\$ 91,604,000</u>
Financial revenues (included in net sales)			
Environmental Products	\$ 6,049,000	\$ 6,113,000	\$ 5,170,000
Fire Rescue	9,490,000	8,082,000	7,166,000
Total financial revenues	<u>\$ 15,539,000</u>	<u>\$ 14,195,000</u>	<u>\$ 12,336,000</u>

**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Due to the nature of the company's customers, a significant portion of the Environmental Products and Fire Rescue financial revenues is exempt from federal income tax.

A summary of the company's continuing operations by geographic area for the three-year period ended December 31, 2001 is as follows:

	<u>2001</u>	<u>2000</u>	<u>1999</u>
<b>United States</b>			
Net sales	\$891,708,000	\$934,361,000	\$816,900,000
Operating income	76,630,000	103,704,000	88,012,000
Long-lived assets	376,890,000	344,367,000	334,833,000
<b>All non-U.S. (principally Europe)</b>			
Net sales	\$180,467,000	\$171,766,000	\$160,309,000
Operating income	15,374,000	12,950,000	13,340,000
Long-lived assets	42,883,000	69,027,000	73,815,000

The company had no significant amounts of sales to or long-lived assets in an individual country outside of the United States.

During 2000, the company decided to divest the operations of the Sign Group and began to search for a qualified buyer of that business. The Sign Group manufactures for sale or lease illuminated, non-illuminated and electronic advertising sign displays primarily for commercial and industrial markets. It also enters into contracts to provide maintenance service for the signs it manufactures as well as for signs manufactured by others. The results of the Sign operations are reported as discontinued operations in the financial statements. Sign revenues for the years ended December 31, 2001, 2000 and 1999 were \$58,817,000, \$59,846,000 and \$84,687,000, respectively. Unfavorable economic conditions in 2001 have adversely affected the company's ability to sell the entity. The Sign Group continues to be actively marketed at a reasonable price and the company will continue its efforts to divest the business during 2002. The company expects to recover its net investment in this business.

The company incurred \$3,627,000 in restructuring charges during 2001 principally resulting from reductions in work force through early retirement and job eliminations. Of this amount, the Environmental Products Group incurred costs of \$798,000, the Fire Rescue Group incurred costs of \$854,000, the Safety Products Group incurred costs of \$461,000 and the Tool Group incurred costs of \$1,514,000. At December 31, 2001, the remaining liability was not material. In 2000, the company also incurred \$3,744,000 in restructuring charges relating to the consolidation of facilities and operations. Of this amount, the Environmental Products Group incurred costs of \$2,773,000 and the Tool Group incurred \$971,000.

**NOTE N—NET INCOME PER SHARE**

The following table summarizes the information used in computing basic and diluted income per share for the three-year period ending December 31, 2001:

	<u>2001</u>	<u>2000</u>	<u>1999</u>
Numerator for both basic and diluted income per share computations—net income	<u>\$47,573,000</u>	<u>\$57,537,000</u>	<u>\$57,537,000</u>
Denominator for basic income per share—weighted average shares outstanding	45,314,000	45,388,000	45,775,000
Effect of employee stock options (dilutive potential common shares)	<u>129,000</u>	<u>133,000</u>	<u>183,000</u>
Denominator for diluted income per share—adjusted shares	<u>45,443,000</u>	<u>45,521,000</u>	<u>45,958,000</u>

**NOTE O—COMMITMENTS**

The company leases certain facilities and equipment under operating leases, some of which contain options to renew. Total rental expense on all operating leases was \$7,985,000 in 2001, \$8,297,000 in 2000 and \$8,037,000 in 1999. Sublease income and contingent rentals relating to operating leases were insignificant. At December 31,

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2001, minimum future rental commitments under operating leases having noncancelable lease terms in excess of one year aggregated \$30,337,000 payable as follows: \$7,197,000 in 2002, \$5,481,000 in 2003, \$4,458,000 in 2004, \$3,163,000 in 2005, \$2,655,000 in 2006 and \$7,383,000 thereafter.

At December 31, 2001 and 2000, the company had outstanding standby letters of credit aggregating \$19,858,000 and \$17,214,000, respectively, principally to act as security for retention levels related to casualty insurance policies and to guarantee the performance of subsidiaries that engage in export transactions to foreign governments and municipalities.

#### NOTE P—CHANGE IN ACCOUNTING

In the fourth quarter of 2000, the company changed its method of accounting for recognizing revenues for product sales. Effective with this change, retroactively applied to January 1, 2000, the company recognizes revenues based upon the respective terms of delivery for each sale agreement. This change was required by Staff Accounting Bulletin (SAB) No. 101 issued by the Securities and Exchange Commission. In years prior to 2000, the company recognized substantially all of its revenues for product sales as products were shipped, as this method was then in compliance with generally accepted accounting principles.

For the year ended December 31, 2000, the company recognized sales of \$10,052,000 and the related operating income of \$1,362,000 resulting from the change in accounting method; these amounts were previously recognized in sales and income in 1999 under the company's previous accounting method. These sales and the related income also account for the cumulative effect of the change in accounting method on prior years, which resulted in a charge to net income of \$844,000 (net of taxes of \$518,000), or \$.02 per diluted share. This charge reflects the adoption of SAB No. 101 and is included in the year ended December 31, 2000. Pro-forma net income amounts for the three-year period ending December 31, 2001, assuming the change in method was retroactively applied to the beginning of that period, are as follows:

	<u>2001</u>	<u>2000</u>	<u>1999</u>
Net income	\$47,573,000	\$58,381,000	\$57,268,000
Diluted net income per share	\$ 1.05	\$ 1.28	\$ 1.25

#### NOTE Q—NEW ACCOUNTING PRONOUNCEMENTS

In June 2001, the Financial Accounting Standards Board issued Statements of Financial Accounting Standards No. 141, "Business Combinations", effective July 1, 2001, and No. 142, "Goodwill and Other Intangible Assets", effective for fiscal years beginning after December 15, 2001. Under the new standards, goodwill and intangible assets deemed to have indefinite lives will no longer be amortized but will be subject to annual impairment tests in accordance with these statements. Other intangible assets will continue to be amortized over their useful lives.

The company will apply the new accounting standards for goodwill and other intangible assets beginning in the first quarter of 2002. Application of non-amortization provisions of the statement is expected to result in an increase in pre-tax income by approximately \$8 million, or \$.12 per share, in 2002. During 2002, the company will perform the first of the newly-required impairment tests of goodwill and indefinite-lived intangible assets as of January 1, 2002 and has not yet determined the effects these tests will have, if any, on earnings and financial position.

Statement of Financial Accounting Standards No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets", addresses financial accounting and reporting for the impairment or disposal of long-lived assets. The provisions of this statement are effective for financial statements issued for fiscal years beginning after



# FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

December 15, 2001. The company is studying the provisions of this statement and has yet not determined its effects, if any.

### NOTE R—SELECTED QUARTERLY DATA (UNAUDITED)

(in thousands of dollars except per share amounts)

	For the three-month period ended							
	2001				2000			
	March 31	June 30	September 30	December 31	March 31	June 30	September 30	December 31
Net sales	\$258,007	\$286,817	\$253,403	\$273,948	\$260,181	\$286,825	\$258,577	\$300,544
Gross margin	79,940	85,681	72,129	74,511	82,807	88,786	80,534	85,217
Income from continuing operations	11,626	16,712	8,853	9,399	13,763	16,198	14,705	12,989
Income (loss) from discontinued operations		307	298	378	939	172	(25)	(360)
Cumulative effect of change in accounting					(844)			
Net income	11,626	17,019	9,151	9,777	13,858	16,370	14,680	12,629
Per share data— diluted:								
Income from continuing operations	.26	.37	.20	.21	.30	.36	.32	.29
Income (loss) from discontinued operations		.01	.01	.01	.02			(.01)
Cumulative effect of change in accounting					(.02)			
Net income*	.26	.37	.20	.22	.30	.36	.32	.28
Dividends paid per share	.195	.195	.195	.195	.190	.190	.190	.190
Market price range per share								
High	24.15	24.63	24.01	22.94	18.50	21.50	22.94	24.13
Low	18.40	18.80	17.00	17.20	14.75	16.50	16.75	17.13

\* amounts may not add due to rounding

The company incurred pre-tax restructuring charges (see Note M) of \$3,627,000 for the three-month period and year ending December 31, 2001. In 2000, the company incurred pre-tax restructuring charges of \$75,000, \$837,000 and \$2,832,000 for each of the three-month periods ending June 30, September 30 and December 31, respectively.

## REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

To the Shareholders and Board of Directors  
of Federal Signal Corporation

We have audited the accompanying consolidated balance sheets of Federal Signal Corporation and subsidiaries as of December 31, 2001 and 2000 and the related consolidated statements of income, comprehensive income and cash flows for each of the three years in the period ended December 31, 2001. These financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Federal Signal Corporation and subsidiaries as of December 31, 2001 and 2000, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2001 in conformity with accounting principles generally accepted in the United States.

As discussed in Notes A and P to the financial statements, in 2000 the company changed its method of revenue recognition.

*Ernst + Young LLP*

Chicago, Illinois  
January 29, 2002

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

### FINANCIAL REVIEW

#### Consolidated Results of Operations

Federal Signal Corporation's net sales declined 3% in 2001 to \$1.07 billion compared to the \$1.11 billion in 2000. Income from continuing operations was \$46.6 million in 2001 compared to \$57.7 million in 2000. Diluted income per share from continuing operations was \$1.03 in 2001 compared to \$1.27 in 2000; earnings were adversely affected by \$.05 in restructuring charges in both 2001 and 2000. Net income in 2001 was \$47.6 million, or \$1.05 per diluted share compared to \$57.5 million, or \$1.26 per diluted share, in 2000. Net income per share amounts included \$.02 per share in both 2001 and 2000 from the discontinued operations of the Sign Group. Net income in 2000 also included a \$.02 per share charge relating to the cumulative effect of a change in accounting for revenue recognition required by Staff Accounting Bulletin (SAB) No. 101 issued by the Securities and Exchange Commission. The 2001 sales results of the company's continuing operations reflected a very weak industrial economy in the U.S. as well as order and sales delays in the company's Fire Rescue and Safety Products groups. Sales prices in 2001 were essentially flat with the prior year reflecting the weaker industrial market conditions; the effects of acquisitions on 2001 sales comparisons to 2000 were insignificant. Sales to customers in the United States declined 3% in 2001 and sales to non-U.S. customers declined 2% (1% in functional currency). Incoming orders declined 3% in 2001 with orders from U.S. customers off 3% from a year ago and orders from non-U.S. customers down 1%.

Net sales increased 13% in 2000 to \$1.11 billion compared to the \$.98 billion in 1999. Income from continuing operations increased 6% to \$57.7 million in 2000; excluding restructuring charges incurred in the company's Environmental Products and Tool groups, income from continuing operations increased 10%. Diluted income per share from continuing operations increased 8% to \$1.27 in 2000; excluding restructuring charges, income per share from continuing operations increased 12% to \$1.32. Net income in 2000 remained flat at \$57.5 million with diluted net income per share increasing \$.01 to \$1.26 in 2000. Net income and net income per share amounts included \$.7 million (\$.02 per share) income from the discontinued operations of the Sign Group and a charge of \$.8 million (\$.02 per share) for the cumulative effect of a change in accounting for revenue recognition. The improved results from the company's continuing operations reflected growth in sales and earnings before restructuring charges in all four continuing groups, led by the significantly increased results of the Fire Rescue Group. Federal Signal's 13% sales increase in 2000 was a result of a 1% increase in prices and a 12% increase in volume including approximately 3% relating to added volume from acquired businesses. Sales to customers in the United States increased 17% in 2000 and sales to non-U.S. customers increased 3% (9% in functional currency). Incoming orders increased 9% in 2000 with orders from U.S. customers increasing 10% and orders from non-U.S. customers increasing 8%.

The company focuses on operating margin, rather than either the gross margin component or the selling, general, and administrative (SG&A) cost component of operating margin when setting overall Federal Signal performance targets and monitoring results. The reasons for this focus are: 1) the distinct differences in the cost structures of the company's businesses, and 2) the varying growth rates of these individual businesses. This combination dictates that the separate operating margin components are only useful in managing individual business performance. In looking at total profitability of the company's U.S. and non-U.S. operations, the company recognizes that some of its U.S. operations have benefited from selling their products through distribution channels of non-U.S. operations. The following table summarizes the company's gross margins and operating margins for the last five years (percent of sales):

	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>	<u>1997</u>
Net sales	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of sales	<u>70.9</u>	<u>69.5</u>	<u>69.2</u>	<u>69.0</u>	<u>68.4</u>
Gross profit margin	29.1	30.5	30.8	31.0	31.6
SG&A expenses	<u>20.5</u>	<u>20.0</u>	<u>20.4</u>	<u>20.6</u>	<u>20.4</u>
Operating margin	<u>8.6%</u>	<u>10.5%</u>	<u>10.4%</u>	<u>10.4%</u>	<u>11.2%</u>

Gross profit margins of 29.1% in 2001 are somewhat lower than the average of the 1997-2000 period (31.0%) largely reflecting three significant factors: a very slow industrial economy reduced sales of the company's high-margin industrial products and resulted in a temporary shift to lower gross margin products; competitive price pressures reduced the potential for price increases on the company's products; and certain restructuring

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

### FINANCIAL REVIEW (Continued)

charges were recorded as part of cost of sales. SG&A expenses as a percent of sales were 20.5% in 2001, 20.3% excluding restructuring charges, essentially flat with the average of the preceding four-year period. The company began seeing lower SG&A cost ratios beginning in 1999 and into 2000 when SG&A as a percent of sales was 19.6% (excluding the \$3.7 million in restructuring charges). The increase in 2001 from 2000 reflected higher percentages of marketing and engineering expenses incurred to support new product introductions as well as the effect of maintaining certain fixed costs in a year of sales declines in three of the company's groups. Operating margin excluding restructuring charges was 8.9% in 2001 compared to 2000's 10.9%. This compares to the average of 10.7% for the 1997-2000 period. Operating margins in 2001 declined largely as a result of the same reasons gross margins declined and SG&A percent of sales increased. Since operating margins have declined from the company's rate achieved in 1997, an explanation of that trend is warranted. The decline in the company's operating margin prior to 2000, for the most part, reflects lower operating margins of the Fire Rescue Group. Operating margins of the company's continuing businesses outside of the Fire Rescue Group were 14.8% in 2000 and compared favorably to a fairly consistent level of 14.6% averaged in the 1996-1999 period. In 1997 through 1999, significant operating issues in the Fire Rescue Group adversely affected the company's margins. Chassis and related component supply shortages, while affecting many of the company's vehicle-based businesses in 1997 and 1998, had its most severe impact on the U.S.-based fire rescue business. Shortages of components and skilled people and installation of an enterprise resource planning system adversely affected Fire Rescue sales and earnings in 1999. During 2000 and 2001, Fire Rescue achieved dramatic improvements in throughput, productivity, customer service and quality and saw the group's operating margin expand to 7.5% excluding restructuring charges from the 3.5% experienced in 1999.

Interest expense declined \$5.0 million in 2001 largely as a result of a much lower short-term interest rate environment in 2001. The much lower interest rates were partially offset by a significant refinancing of short-term debt with funded debt at higher interest rates, increased borrowings related to businesses acquired for cash in early 2001 and a \$25 million increase in financial services assets. The increase in interest expense of \$8.1 million in 2000 was largely a result of borrowings related to businesses acquired for cash in mid-1999 and early 2000, a \$17 million purchase of company stock, a \$23 million increase in financial services assets and higher short-term borrowing costs. Weighted average interest rates on short-term borrowings were 4.6% in 2001, 6.5% in 2000, and 5.4% in 1999.

At the end of 2001, the company changed its assumptions for discount rates used in determining the actuarial present values of accumulated and projected benefit obligations for its postretirement plans. The company reduced the discount rate to 7.3% at the end of 2001 from the 7.7% used at the end of 2000 for its U.S. plan because of the lower interest rate environment experienced at the end of 2001. In January 2002, the company established its other significant cost assumptions for its U.S. benefits as follows: expected long-term rate of return on plan assets—9.5%; rate of increase in compensation levels—3.5%. The company expects that the change in these assumptions will increase 2002 pension costs by approximately \$.04 per share compared to 2001. The company also incurred approximately \$.7 million in nonrecurring pension costs in 2001 as a result of the company's fourth quarter restructuring.

The company's effective tax rate in 2001 of 27.7% was down from the 31.7% in 2000 and the 31.4% in 1999. The lower tax rate in 2001 reflects the increased mix of tax-exempt revenues earned by the company's Environmental Products and Fire Rescue groups as well as the benefits of higher research and development credits and lower tax rates of the company's foreign operations.

Certain of the company's businesses are susceptible to the influences of seasonal buying or delivery patterns. The company's businesses which tend to have lower sales in the first calendar quarter compared to other quarters as a result of these influences are street sweeping, fire rescue products, outdoor warning, municipal emergency signal products, parking systems and signage.

### Group Operations

The company's groups saw mixed sales and earnings results in 2001. Fire Rescue Group operating margins again improved in 2001 despite a lower sales level. A weak industrial economy in the U.S. adversely affected 2001 sales, particularly in the Tool, Safety Products and Environmental Products groups. Earnings in all four groups in 2001 reflect restructuring charges principally relating to reductions in force.



**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**  
**FINANCIAL REVIEW (Continued)**

***Environmental Products***

Environmental Products Group sales rose 10% and new orders rose 2% in 2001. Earnings before restructuring charges decreased 19%. Sales growth was strong in U.S. municipal sweepers, augmented by the acquisition of the assets of Athey Products Corporation in March. Industrial vacuum truck and industrial water blaster sales were down moderately for the full year, but slowed dramatically in the last half of the year. Operating earnings declined substantially as continuing vacuum truck plant consolidation costs and new-product-related costs, plus a lower margin sales mix, reduced operating margin. The group incurred restructuring charges of \$.8 million in 2001.

In 2000, Environmental Products orders rose 12% and sales increased 3% while operating income declined 6%. Excluding restructuring charges of \$2.8 million incurred to consolidate the group's vacuum truck operations into its Streator, Illinois facility, operating income increased 6%. The group's sales growth was due to broadly good performance in sweepers, water blasters and municipal vacuum trucks.

***Fire Rescue***

Fire Rescue Group earnings before restructuring charges were up 12% on a 4% decline in sales. New orders declined 2%. New orders and sales declined on essentially flat worldwide markets as orders were delayed in the U.S. by a Federal government subsidy program for fire apparatus and by the September 11 events which changed fire department priorities in the fourth quarter. Earnings increased significantly as group manufacturing operations continued to improve, raising overall operating margin. The group incurred \$.9 million in restructuring charges in 2001.

In 2000, Fire Rescue orders increased 10%; earnings more than doubled on a 26% increase in sales. Orders for the group were strong in good North American municipal markets. The group's Florida-based manufacturing operations increased productivity, throughput and quality and saw operating margin improve to 6.4% in 2000 from 3.5% in 1999. Sales at the Finland-based operations were modestly higher, despite the markka weakening against the U.S. dollar, and income declined as this unit incurred costs related to the rollout of several new products.

***Safety Products***

Safety Products Group earnings before restructuring charges fell 12% on a 4% sales decline. New orders increased 4%. New orders were up for all major product lines except industrial. Sales fell as substantial projects in parking equipment and outdoor warning systems were delayed into 2002. The delay between orders and installation of these projects was the major cause of the group's reduced earnings and margins in 2001.

In 2000, Safety Products orders decreased 3% while sales increased 2%; operating income increased 6%. An improved operating margin reflected municipal market sales strength offsetting continued weak oilfield-related sales.

***Tool***

Tool Group earnings, before restructuring charges of approximately \$1.5 million, fell 43% on a 17% decline in sales. New orders declined 19%. New orders, sales and earnings all declined sharply in very weak global industrial markets; the most severe decline was in North America and the earnings weakness was across all major product lines. Markets continued to weaken throughout 2001. Notwithstanding the sales decline, the group held its leading market shares and increased that share in certain product lines.

In 2000, Tool Group orders increased 24% and sales increased 23%; earnings increased 6% including restructuring charges of \$1.0 million. Excluding the restructuring charges, operating income increased 9% in 2000. The group's results reflected the benefits of two acquisitions, which performed strongly, restructuring charges incurred to consolidate two superhard cutting tool operations, and weak U.S. auto and broad industrial markets in the second half of the year.

## FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES

### FINANCIAL REVIEW (Continued)

#### *Sign (discontinued operations)*

In 2000, the company decided to divest the Sign Group and began searching for a buyer of this business. The group saw markets weaken in 2000 and 2001. The results of this group are reported as discontinued operations in the company's consolidated financial statements. Due to the slower economic environment in 2000 and 2001, it has taken longer to sell the entity than originally planned. However, it is being actively marketed at a reasonable price and the company will continue its efforts to divest the operations during 2002.

#### **Financial Services Activities**

The company maintains a large investment (\$239 million and \$214 million at December 31, 2001 and 2000, respectively) in lease financing and other receivables that are generated by its environmental products and fire rescue operations. For the five-year period ending December 31, 2001 these assets continued to be leveraged in accordance with the company's stated financial objectives (see further discussion in "Financial Position and Cash Flow").

Financial services assets have repayment terms generally ranging from two to ten years. The increase in these assets resulted from increasing sales of environmental products and increased use of financing by Fire Rescue Group customers.

#### **Financial Position and Cash Flow**

The company emphasizes generating strong cash flows from operations, reaching a record \$95 million in 2001, up nearly 50% from \$64 million in 2000. Working capital improvements, particularly in the area of receivables management, were the main reasons for the increase. Improved inventory utilization should further improve cash flow in 2002 as the company continues to make process improvements in all of its groups as a part of the company-wide lean enterprise initiative.

During the 1997-2001 period, the company utilized its strong cash flows from operations and available debt capacity to: 1) fund in whole or in part strategic acquisitions of companies operating in markets related to those already served by the company; 2) purchase increasing amounts of equipment principally to provide for further cost reductions and increased productive capacity for the future as well as tooling for new products; 3) increase its investment in financial services activities; 4) pay increasing amounts in cash dividends to shareholders; and 5) repurchase a small percentage of its outstanding common stock each year.

Cash flows for the five-year period ending December 31, 2001 are summarized as follows (in millions):

	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>	<u>1997</u>
Cash provided by (used for):					
Operating activities	\$ 95.1	\$ 64.4	\$ 57.7	\$ 75.5	\$ 64.2
Investing activities	(59.2)	(64.8)	(105.1)	(93.0)	(38.4)
Financing activities	(32.6)	5.2	40.9	22.2	(27.5)

In order to show the distinct characteristics of the company's investment in its manufacturing activities and its investment in its financial services activities, the company has presented separately these investments and their related liabilities. Different ratios of debt and equity support each of these two types of activities.

One of the company's financial objectives is to maintain a strong financial position. At December 31, 2001, the company's debt-to-capitalization ratio of its manufacturing operations was 44% compared to 45% a year earlier. The company expects to again achieve a high level of cash flow from operations in 2002 enabling it to further reduce the debt-to-capitalization ratio of its manufacturing operations absent funding needs for potential large acquisitions. The company believes that its financial assets, due to their overall quality, are capable of sustaining a leverage ratio of 87%. At both December 31, 2001 and 2000, the company's debt-to-capitalization ratio for its financial services activities was 87% for its continuing operations.

As indicated earlier, management focuses substantial effort on improving the utilization of the company's working capital. The company's current ratio for its manufacturing operations was 1.9 at December 31, 2001 and 1.2 at December 31, 2000. The increase in 2001 is largely due to the company's refinancing of its short-term debt with funded long-term debt. The company anticipates that its financial resources and major sources of liquidity,

**FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**  
**FINANCIAL REVIEW (Continued)**

including cash flow from operations, will continue to be adequate to meet its operating and capital needs in addition to its financial commitments.

In mid 2001, and again in the fourth quarter, the company refinanced a total of \$165 million of its short-term commercial paper with funded debt provided by a group of insurance companies. The term of the new debt ranges from three to ten years. This refinancing increased liquidity under the company's bank credit facility and provided a more balanced maturity schedule for repayment of its total debt.

**Market Risk Management**

The company is subject to risks associated with changes in interest rates and foreign exchange rates. The company principally utilizes two types of derivative financial instruments: 1) interest rate swaps and 2) foreign exchange forward contracts to manage risks associated with sales and purchase commitments denominated in foreign currencies. The company does not hold or issue derivative financial instruments for trading or speculative purposes and is not a party to leveraged derivatives.

Approximately 50% of the company's debt at December 31, 2001 was used to support financial services assets; the average remaining life of those assets is typically under three years. The company is currently comfortable with a sizeable portion of floating rate debt to support these financial services assets, since a rise in borrowing rates would normally correspond with a rise in lending rates within a reasonable period.

The company manages its exposure to interest rate movements by maintaining a proportionate relationship between fixed-rate debt to total debt within established percentages. The company uses funded fixed-rate borrowings as well as interest rate swap agreements to balance its overall fixed/floating interest rate mix.

At December 31, 2001 and 2000, the company was party to interest rate swap agreements with aggregate notional amounts of \$130,000,000 and \$25,000,000, respectively. See Note H to the consolidated financial statements for a description of these agreements. All of the interest rate swap agreements qualify for hedge accounting treatment except for the \$25,000,000 swap cancelable by a counterparty. Changes in the fair value of the cancelable swap are reflected in the caption "Other income (expense)" in each accounting period beginning in 2001 as required by SFAS No. 133; in 2001, the company charged pre-tax earnings \$1.4 million, \$.02 per share, reflecting the implied fair value loss on the agreement.

Significant interest rate sensitive instruments at December 31, 2001 and 2000 were as follows (dollars in millions):

	2001							Fair value	2000	
	2002	2003	2004	2005	2006	Thereafter	Total		Total	Fair value
Long-term debt										
Fixed rate										
Principal	\$ 8.4	\$ .6	\$25.1	\$17.3	\$82.2	\$105.7	\$239.3	\$240.3	\$ 78.8	\$ 79.4
Average interest rate	6.3%	6.2%	6.2%	6.1%	6.0%	6.5%	6.2%		7.0%	
Variable rate										
Principal	\$ .5	\$ .5	\$ .5	\$ .5	\$ .2		\$ 2.2	\$ 2.2	\$ 52.9	\$ 52.9
Average interest rate	3.2%	3.2%	3.2%	3.2%	3.2%		3.2%		7.6%	
Short-term debt—variable rate										
Principal	\$233.9						\$233.9	\$233.9	\$331.1	\$331.1
Average interest rate	2.7%						2.7%		7.6%	
Interest rate swaps (pay fixed, receive variable)										
Notional amount						\$ 25.0	\$ 25.0	\$ (1.4)	\$ 25.0	\$ (.2)
Average pay rate						5.1%	5.1%		5.1%	
Average receive rate						2.0%	2.0%		6.8%	
Interest rate swaps (receive fixed, pay variable)										
Notional amount					\$55.0	\$ 50.0	\$105.0	\$ (2.5)		
Average pay rate					2.7%	3.8%	3.2%			
Average receive rate					5.5%	6.8%	6.1%			

## **FEDERAL SIGNAL CORPORATION AND SUBSIDIARIES**

### **FINANCIAL REVIEW (Continued)**

The company had an insignificant amount of foreign exchange forward contracts outstanding at December 31, 2001.

#### **Other Matters**

The company's restructuring in late 2001 resulted in a reduction in force of less than 3% of the company's employees. The company took this action largely as a result of the current economic environment and the outlook for 2002, principally in the company's industrial markets. The company expects that the restructuring will have no significant effect on the company's internal control structure.

The company has a business conduct policy applicable to all employees and regularly monitors compliance with that policy. The company has determined that it had no significant related party transactions for the three-year period ending December 31, 2001.

The company has reviewed its financial arrangements and has determined that off-balance sheet arrangements, other than disclosed in the notes to the financial statements, do not exceed \$1 million.

## Shareholder Information

### Annual Meeting of Shareholders

Thursday, April 18, 2002, 11:00 a.m., Oak Brook Marriott Hotel, 1401 West 22nd Street, Oak Brook, Illinois 60523.

### Common Stock Data

Federal Signal Corporation's Common Stock is listed and traded on the New York Stock Exchange under the symbol FSS and is quoted in financial press listings as "FedlSgnl" or "FdSgnl". The company expects to continue paying regular quarterly cash dividends as it has done since 1948, depending, of course, on future earnings, financial condition and capital requirements.

### Transfer Agent and Registrar

EquiServe Trust Company is the transfer agent and registrar for Federal Signal Common Stock. Notices regarding change of address and inquiries regarding lost dividend checks, lost or stolen stock certificates and transfers of stock, other than a purchase and sale which must be handled through a broker, should be directed to EquiServe Trust Company, N.A., P.O. Box 2500, Jersey City, New Jersey 07303-2500, 800-446-2617.

### Dividend Reinvestment Plan

This plan enables Federal Signal shareholders, who hold at least 50 shares in their own name to automatically and regularly apply common stock cash dividends toward the purchase of additional shares of common stock. Participants have the option of purchasing more common shares through the plan with direct cash payments. The company pays all bank service fees and brokerage commissions for common stock purchased through the plan. At year-end 2001, 1,921 shareholders (49% of record holders) were enrolled in the plan. This represents about 4% of outstanding stock or 2,004,000 shares participating in the plan. Inquiries regarding enrollment in the plan or questions concerning established accounts should be directed to EquiServe, Dividend Reinvestment Service, P.O. Box 2598, Jersey City, New Jersey 07303-2598.

### Reports

A copy of the company's 10-K and financial statements may be obtained free of charge by contacting the Office of the Secretary, Federal Signal Corporation, 1415 West 22nd Street, Oak Brook, Illinois 60523-2004, 630-954-2021.

### Investor Relations

Stephanie K. Kushner, Vice President and Chief Financial Officer, 630-954-2020.

### Shareholders

Some of Federal Signal's shareholders have their shares registered in their broker's name or "street" name. If you are a "street" name holder and are not receiving company communications directly or in a timely manner, we would be pleased to send this information to you if you will send us your name and address. Federal Signal had a total of approximately 20,000 "street" name and record shareholders at year-end 2001.

### Webcast of Quarterly Conference Call

The company anticipates earnings press releases followed by a conference call later the same day on April 16, July 19 and October 22, 2002. You may listen to the conference call over the internet through Federal's website at <http://www.federalsignal.com>. To listen to the call live, you should go to the website at least 15 minutes in advance to register and download and install, if necessary, the required free audio software. A replay of the call will be accessible shortly after the call concludes from our website for approximately one week.

### Directors

Joseph J. Ross, 56 ★  
Chairman and  
Chief Executive Officer  
Federal Signal Corporation  
Elected 1986

Charles R. Campbell, 62 ▲◆  
Principal, The Everest Group  
Elected 1998

James C. Janning, 53 ▲●  
Group President  
Harbour Group, Ltd.  
Elected 1999

Paul W. Jones, 53 ●◆  
Chairman, President and  
Chief Executive Officer  
U.S. Can Company  
Elected 1998

James A. Lovell, Jr., 73 ★◆  
President, Lovell  
Communications  
Elected 1984

Walden W. O'Dell, 56 ●  
Chairman, President and  
Chief Executive Officer  
Diebold, Inc.  
Elected 2001

Richard R. Thomas, 68 ▲★  
Retired, President  
Tool Group  
Federal Signal Corporation  
Elected 1994

### Committees

- ▲ Audit
- Compensation and Benefits
- ◆ Corporate Governance
- ★ Executive

### Officers

Joseph J. Ross, 56  
Chairman and  
Chief Executive Officer  
19 years service

John DeLeonardis, 55  
Vice President, Taxes  
15 years service

Duane A. Doerle, 46  
Vice President, Corporate  
Development  
17 years service

Andrew E. Graves, 43  
President and  
Chief Operating Officer  
1 year service

Stephanie K. Kushner, 46  
Vice President and  
Chief Financial Officer

Robert W. Racic, 53  
Vice President and Treasurer  
30 years service

Richard L. Ritz, 48  
Vice President and  
Controller  
18 years service

Jennifer L. Sherman, 37  
Deputy General Counsel  
and Assistant Secretary  
7 years service

Kim A. Wehrenberg, 50  
Vice President, General  
Counsel and Secretary  
15 years service

James S. Weir, 43  
Assistant Treasurer  
15 years service

### Dividend Dates

Federal Signal Corporation anticipates the following cash dividend dates for 2002:

### Record Date

March 14  
June 13  
September 12  
December 13

### Payment Date

April 2  
July 2  
October 1  
January 3 (2003)