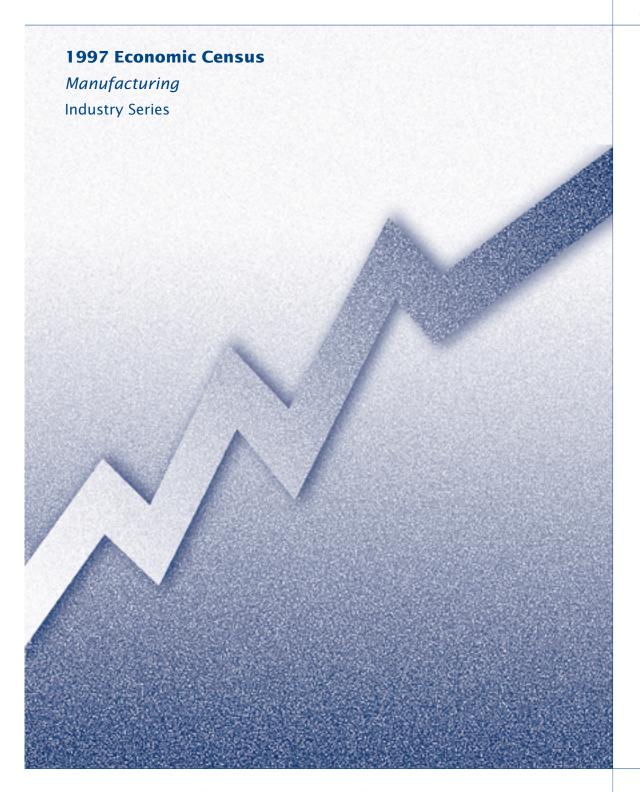
Fabricated Structural Metal Manufacturing

1997

ssued July 1999

EC97M-3323B





Helping You Make Informed Decisions

U.S. Department of Commerce Economics and Statistics Administration U.S. CENSUS BUREAU



ACKNOWLEDGMENTS

The staff of the Manufacturing and Construction Division prepared this report. Judy M. Dodds, Assistant Chief for Census and Related Programs, was responsible for the overall planning, management, and coordination. Kenneth Hansen, Chief, Manufactured Durables Branch, assisted by Mike Brown, Renee Coley, Raphael Corrado, and Milbren Thomas, Section Chiefs, Michael Zampogna, Former Chief, Manufactured Nondurables Branch, assisted by Allen Foreman, Robert Miller, Robert Reinard, and Nat Shelton, Section Chiefs, and Tom Lee, Robert Rosati, and Tom Flood, Special Assistants, performed the planning and implementation. Stephanie Angel, Brian Appert, Stanis Batton, Carol Beasley, Chris Blackburn, Larry Blumberg, Vera Harris-Bourne, Brenda Campbell, Suzanne Conard, Vance Davis, Mary Ellickson, Matt Gaines, Merry Glascoe, Kay Hanks, Karen Harshbarger, Nancy Higgins, James Hinckley, Walter Hunter, Jim Jamski, Evelyn Jordan, Robert Lee, John Linehan, Paul Marck, Keith McKenzie, Philippe Morris, Joanna Nguyen, Betty Pannell, Joyce Pomeroy, Venita Powell, Cynthia Ramsey, Chris Savage, Aronda Stovall, Sue Sundermann, Thanos Theodoropoulos, Dora Thomas, Ann Truffa, Ronanne Vinson, Denneth Wallace, Tempie Whittington, Lissene Witt, and Mike Yamaner provided primary staff assistance.

Brian Greenberg, Assistant Chief for Research and Methodology Programs, assisted by Stacey Cole, Chief, Manufacturing Programs Methodology Branch, and Robert Struble, Section Chief, provided the mathematical and statistical techniques as well as the coverage operations. Jeffrey Dalzell and Cathy Ritenour provided primary staff assistance.

Mendel D. Gayle, Chief, Forms, Publications, and Customer Services Branch, assisted by **Julius Smith Jr.** and **Baruti Taylor,** Section Chiefs, performed overall coordination of the publication process.

Kim Credito, Patrick Duck, Chip Murph, Wanda Sledd, and Veronica White provided primary staff assistance.

The Economic Planning and Coordination Division, Lawrence A. Blum, Assistant Chief for Collection Activities and Shirin A. Ahmed, Assistant Chief for Post-Collection Processing, assisted by Dennis Shoemaker, Chief, Post-Collection Census Processing Branch, Brandy Yarbrough, Section Chief, Sheila Proudfoot, Richard Williamson, Andrew W. Hait, and Jennifer E. Lins, was responsible for developing the systems and procedures for data collection, editing, review, correction and dissemination

The staff of the National Processing Center, **Judith N. Petty,** Chief, performed mailout preparation and receipt operations, clerical and analytical review activities, data keying, and geocoding review.

The Geography Division staff developed geographic coding procedures and associated computer programs.

The Economic Statistical Methods and Programming Division, Charles P. Pautler Jr., Chief, developed and coordinated the computer processing systems. Martin S. Harahush, Assistant Chief for Quinquennial Programs, assisted by Barbara Lambert and Christina Arledge were responsible for design and implementation of the computer systems. Gary T. Sheridan, Chief, Manufacturing and Construction Branch, Lori A. Guido and Roy A. Smith, Section Chiefs, supervised the preparation of the computer programs.

Computer Services Division, **Debra Williams**, Chief, performed the computer processing.

The staff of the Administrative and Customer Services Division, **Walter C. Odom,** Chief, performed planning, design, composition, editorial review, and printing planning and procurement for publications, Internet products, and report forms. **Cynthia G. Brooks** provided publication coordination and editing.

Fabricated Structural Metal Manufacturing

EC97M-3323B

1997 Economic Census

Manufacturing **Industry Series**





U.S. Department of Commerce William M. Daley, Secretary Robert L. Mallett, **Deputy Secretary**

> **Economics** and Statistics Administration Robert J. Shapiro, **Under Secretary for Economic Affairs**

U.S. CENSUS BUREAU Kenneth Prewitt,

Director



Economics and Statistics Administration Robert J. Shapiro, Under Secretary for Economic Affairs



U.S. CENSUS BUREAU
Kenneth Prewitt,
Director
William G. Barron,
Deputy Director
William G. Bostic Jr.,
Chief, Manufacturing
and Construction Division

CONTENTS

	duction to the Economic Census	1 5
TABL	LES .	
1. 2. 3. 4. 5. 6a. 6b. 7.	Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997 Industry Statistics for Selected States: 1997 Detailed Statistics by Industry: 1997 Industry Statistics by Employment Size: 1997 Industry Statistics by Industry and Primary Product Class Specialization: 1997 Products Statistics: 1997 and 1992 Product Class Shipments for Selected States: 1997 and 1992 Materials Consumed by Kind: 1997 and 1992	7 7 8 9 10 11 12
APPI	ENDIXES	
A. B. C. D. E. F.	Explanation of Terms NAICS Codes, Titles, and Descriptions Coverage and Methodology Geographic Notes Metropolitan Areas Footnotes for Products Statistics and Materials Consumed by Kind Comparability of Product Classes and Product Codes: 1997 to 1992	A-1 B-1 C-1 G-1

-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52 Finance and Insurance 53

Real Estate and Rental and Leasing 54 Professional, Scientific, and Technical Services

55 Management of Companies and Enterprises 56 Administrative and Support and Waste

Management and Remediation Services

61 **Educational Services**

Health Care and Social Assistance 62

Arts. Entertainment, and Recreation 71

72 Accommodation and Foodservices

Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division Service Sector Statistics Division

301-457-4673 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the Guide to the 1997 Economic Census and Related Statistics at www.census.gov/econquide. More information on the methodology, procedures, and history of the censuses will be published in the History of the 1997 Economic Census at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

- Α Standard error of 100 percent or more.
- D Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
- F Exceeds 100 percent because data include establishments with payroll exceeding rev-
- Ν Not available or not comparable.
- Revenue not collected at this level of detail for Q multiestablishment firms.
- S Withheld because estimates did not meet publication standards.

- V Represents less than 50 vehicles or .05 percent.
- Χ Not applicable.
- Υ Disclosure withheld because of insufficient
 - coverage of merchandise lines.
- Ζ Less than half the unit shown. 0 to 19 employees.
- a b
- 20 to 99 employees.
- 100 to 249 employees. C
- 250 to 499 employees. e
- f 500 to 999 employees.
- 1,000 to 2,499 employees. g
- h 2,500 to 4,999 employees.
- 5,000 to 9,999 employees.
- 10,000 to 24,999 employees.
- k 25,000 to 49,999 employees.
- 50,000 to 99,999 employees.
- 100,000 employees or more. m
- 10 to 19 percent estimated.
- р q 20 to 29 percent estimated.
- Revised. r
- Sampling error exceeds 40 percent.
- Not elsewhere classified. nec
- Not specified by kind. nsk
- Represents zero (page image/print only).
- (CC) Consolidated city.
- Independent city. (IC)

1997 ECONOMIC CENSUS INTRODUCTION 3 This page is intentionally blank.

Manufacturing

SCOPE

The 1997 Economic Census – Manufacturing covers all manufacturing establishments with one or more paid employees. Manufacturing is defined as the mechanical, physical, or chemical transformation of materials or substances into new products. The assembly of components into new products is also considered manufacturing, except when it is appropriately classified as construction.

Establishments in the manufacturing sector are often described as plants, factories, or mills and typically use power-driven machines and materials-handling equipment. Also included in the manufacturing sector are some establishments that make products by hand, like custom tailors and the makers of custom draperies. While manufacturers typically do not sell to the public, some establishments like bakeries and candy stores that make products on the premises may be included.

GENERAL

This report, from the 1997 Economic Census – Manufacturing, is one of a series of 480 industry reports and 51 geographic area reports, each of which provides statistics for individual industries or states, respectively. Seven of the industry reports are for industries no longer in the manufacturing sector but are included with manufacturing for the 1997 census year. Also included for this sector are General, Product, and Materials Consumed Summary reports, a special report on Concentration Ratios in Manufacturing, and data files on Location of Manufacturing Plants.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by manufacture, cost of materials consumed, value of shipments, capital expenditures, etc. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more in the industry.

State reports, which include the District of Columbia, present similar statistics at the "all manufacturing" level for each state and its metropolitan areas (MAs) with 250 employees or more, and for counties, consolidated cities, and places with 500 employees or more. The state reports also include six-digit NAICS level data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports, as well as revisions to the data made after the release of the industry and state reports.

The Products and Materials Consumed reports summarize the products and materials data published in the industry reports. The Product Summary report also includes data from the Current Industrial Reports (CIR) and a special table with data for products that are primary to more than one industry, which are not in the industry reports.

The Concentration Ratios report publishes data on the percentage of value of shipments accounted for by the 4-, 8-, 20-, and 50-largest companies for each manufacturing industry. Also shown in this report are Hirschmann-Herfindahl Indexes for each industry.

The Location of Manufacturing data files contain statistics on the number of establishments for the three- and six-digit NAICS industry by state, county, place, and ZIP Code by employment-size of the establishment.

GEOGRAPHIC AREAS COVERED

Statistics at the six-digit NAICS industry level are shown for states and the District of Columbia in both the state and industry reports for cells with 100 employees or more.

The state reports also include data at the "all manufacturing" level for a variety of geographies that meet the employment criteria.

Data are available for the metropolitan areas (MAs) with 250 employees or more. The term MA is a general term used to encompass all of the specifically defined metropolitan areas. A consolidated metropolitan statistical area (CMSA) is made up of two or more contiguous primary metropolitan statistical areas (PMSAs) with a combined population of at least 1 million. A PMSA is a subdivision of a CMSA that demonstrates very strong internal economic and social links separate from the ties to other portions of the CMSA. A metropolitan statistical area (MSA) is an integrated economic and social unit with a population of at least 50,000. An MA is made up of one or more counties meeting standards of metropolitan character. In New England, cities and towns, rather than counties, are the component geographic units. Determination of the MAs was made by the Office of Management and Budget (OMB) as of June 30, 1997. The population estimates were from the 1990 Census of Population or a subsequent special

census. When applicable, the make-up of an MA is included in Appendix E. Changes to geographical boundaries are noted in Appendix D.

The state reports include data for counties with 500 employees or more. These are the primary divisions of states, except in Louisiana where they are called parishes and in Alaska where they are called boroughs and census areas. Maryland, Missouri, Nevada, and Virginia have one or more places that are independent of county organizations. These places are treated as counties and places. The counties and places are defined as of January 1, 1997.

The state reports include data for places with 500 employees or more. Places are typically cities, towns, and villages. They may be incorporated municipalities, semiindependent municipalities, special economic urban areas (SEUAs), or other place equivalents.

The state reports also include data for consolidated cities with 500 employees or more. Consolidated cities are made up of separately incorporated municipalities.

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had a major impact on the comparability of data between the 1992 and 1997 censuses. Approximately half of the industries in the manufacturing sector of NAICS do not have comparable industries in the Standard Industrial Classification (SIC) system that was used in the past. If industries are not comparable between the two censuses, historic data are not shown. When applicable, Appendix G shows the product class and product comparability between the two systems.

While most of the change affecting the manufacturing sector was change within the sector, some industries left manufacturing and others came into manufacturing. Prominent among those leaving manufacturing are logging and portions of publishing. Prominent among the industries coming into the manufacturing sector are bakeries, candy stores where candy is made on the premises, custom tailors, makers of custom draperies, and tire retreading. Data for the industries coming into manufacturing as well as those leaving manufacturing are included in the manufacturing industry report series for 1997. However, the state and summary reports only include data for industries in the NAICS definition of manufacturing.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with manufacturing are not included along side the

manufacturing data. This change affects data in the state reports and the general summary.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure, and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments. When the total value of shipments cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. However, the suppressed data are included in higher-level totals. A separate disclosure analysis is performed for capital expenditures that can be suppressed even though value of shipments data are published.

AVAILABILITY OF MORE FREQUENT ECONOMIC **DATA**

The Census Bureau conducts the Annual Survey of Manufactures (ASM) in each of the 4 years between the economic censuses. The ASM is a probability-based sample of approximately 58,000 establishments and collects many of the same industry statistics (including employment, payroll, value of shipments, etc.) as the economic census. However, there are selected statistics not included in the ASM. Among these are the number of companies and establishments, detailed product and materials data, and substate geographic data.

In addition to the ASM, the Census Bureau conducts a Current Industrial Reports (CIR) program. The CIR publishes detailed product statistics for selected manufacturing industries at the U.S. level annually and, in some cases, monthly and/or quarterly. For the 1997 Economic Census - Manufacturing, the annual CIR data are included in the Product Summary report.

The Census Bureau also conducts the monthly Manufacturers' Shipments, Inventories, and Orders (M3) program, which publishes detailed statistics for manufacturing industries at the U.S. level.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS	NAICS		All employees		Production workers						Total capital	
or SIC code	Industry	Com-	estab- lish- ments ²	Number	Payroll (\$1,000)	Number	Hours (1.000)	Wages (\$1,000)	Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	expendi- tures (\$1,000)
		pariico	monto	ramber	(ψ1,000)	radiiboi	(1,000)	(ψ1,000)	(ψ1,000)	(ψ1,000)	(ψ1,000)	(ψ1,000)
332312	Fabricated structural metal											
344100 344920	mfg Fabricated structural metal Miscellaneous metal work (pt) .	2 867 N N	3 040 2 888 152	92 512 83 783 8 729	2 940 742 2 637 889 302 853	66 990 60 969 6 021	138 124 126 440 11 684	1 797 771 1 616 849 180 922	7 217 379 6 396 484 820 895	8 995 169 7 657 911 1 337 258	16 124 652 13 958 631 2 166 021	294 145 263 918 30 227

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control. ²Includes establishments with payroll at any time during the year.

Table 2. Industry Statistics for Selected States: 1997

[States that are disclosures or with less than 100 employees are not shown. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

			All shments	All emp	oloyees	Pr	oduction work	ers				
Industry and geographic area	E¹	Total	With 20 em- ploy- ees or more	Number	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)	Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
332312, FABRICATED STRUCTURAL METAL MFG												
United States	1	3 040	1 176	92 512	2 940 742	66 990	138 124	1 797 771	7 217 379	8 995 169	16 124 652	294 145
Alabama Arizona Arkansas California Colorado	- - 1 1	104 42 33 260 52	49 19 13 85 17	3 636 1 698 1 548 6 972 1 031	114 778 54 108 46 184 243 211 33 665	2 528 940 1 088 4 945 737	7 302 1 790 1 928 10 286 1 453	63 985 21 454 23 941 147 670 20 203	253 273 145 255 125 850 577 472 74 978	332 599 143 348 154 277 509 023 92 281	590 481 298 840 284 879 1 077 684 165 390	12 026 5 644 3 429 19 633 4 166
Connecticut Florida Georgia Idaho Illinois	1 1 2 3 -	32 124 77 14 121	6 43 38 4 44	533 3 323 2 339 218 4 258	20 400 90 328 67 844 7 729 139 881	384 2 379 1 731 165 2 900	775 4 557 3 372 301 6 041	12 755 52 540 42 019 4 428 76 276	48 474 204 170 158 722 16 950 404 007	43 914 299 946 232 743 15 983 320 048	93 004 503 343 391 040 34 471 723 155	1 903 12 102 10 322 915 13 158
Indiana lowa Kansas Kentucky Louisiana	1 2 2	101 35 30 43 56	52 16 12 19 31	3 184 1 078 931 1 072 5 154	101 711 30 516 23 177 33 803 161 178	2 447 759 655 729 4 437	4 813 1 563 1 313 1 490 9 795	65 557 18 596 14 016 20 644 126 669	285 710 70 751 84 112 68 620 366 617	397 822 114 349 84 365 90 944 406 499	679 037 184 819 162 620 160 918 745 075	11 459 4 122 3 674 3 679 10 139
Maine Maryland Massachusetts Michigan Minnesota	1 1 2 2 1	19 28 47 117 52	6 12 14 35 16	459 884 799 2 797 996	14 112 26 656 27 894 93 270 33 935	291 658 540 1 984 661	621 1 086 1 150 4 045 1 274	8 148 14 855 16 520 57 514 18 862	32 147 77 720 66 175 223 788 83 737	42 070 84 663 59 701 226 539 117 565	74 092 163 112 125 961 454 721 201 043	1 313 11 088 2 004 9 849 4 626
Mississippi Missouri Nebraska Nevada New Hampshire	1 1 - 3 3	32 63 22 11 18	14 24 9 2 4	1 090 2 094 726 168 383	30 456 68 445 32 807 7 532 11 921	831 1 493 506 81 260	1 831 2 923 1 042 174 527	19 308 37 434 20 162 2 186 6 633	95 469 165 766 116 554 13 193 22 556	119 314 219 703 144 419 13 551 37 793	212 731 385 671 260 907 27 008 62 538	2 934 6 874 1 396 633 1 386
New Jersey New Mexico New York North Carolina North Dakota	- 2 2 - 1	77 20 118 91 11	14 7 33 33 6	1 216 309 2 340 2 218 448	43 612 7 043 78 929 74 168 10 996	853 226 1 502 1 454 335	1 704 443 3 117 3 079 592	25 576 4 508 45 051 39 819 6 479	102 772 17 336 169 780 189 801 22 254	156 943 15 446 208 961 320 073 37 188	260 571 32 714 377 463 508 793 59 502	2 827 390 6 717 8 361 1 042
Ohio	1 - - -	177 59 61 150 46	62 27 20 68 20	3 947 1 756 1 552 5 486 2 655	133 552 52 141 59 338 177 237 84 075	2 865 1 238 1 074 4 166 1 849	5 811 2 533 2 281 7 498 3 981	79 690 30 371 35 069 109 417 49 701	369 121 140 758 123 271 464 133 197 235	389 993 203 668 149 036 535 120 408 502	762 712 345 405 264 578 987 563 603 090	13 226 6 135 5 281 15 664 12 065
South Dakota	1 1 -	5 102 237 54 70	3 36 110 27 35	227 2 545 9 194 1 984 2 414	7 434 73 463 262 676 65 960 74 283	153 1 926 7 034 1 536 1 691	333 3 983 14 915 3 035 3 317	4 169 47 250 174 665 46 535 45 556	14 406 187 739 620 213 225 345 166 391	24 030 216 481 941 492 261 669 266 099	39 595 402 582 1 553 469 460 600 433 913	499 5 492 27 339 6 006 6 380
Washington West Virginia Wisconsin	1 1 -	87 23 70	24 13 32	1 513 735 2 379	48 158 20 135 78 020	1 117 497 1 693	2 071 1 043 3 508	30 686 13 018 47 965	101 896 38 476 189 669	103 120 49 905 214 437	205 287 88 690 395 203	3 966 1 720 5 996

^{*} Hawaii has no incorporated places in the sense of functioning governmental units; however, in agreement with Hawaiian law, the Bureau of the Census reports data for census designated places (CDPs) which have been designated as place equivalents. Those CDPs, only for the state of Hawaii, with 2,500 or more population are recognized.

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
332312, FABRICATED STRUCTURAL METAL MFG		332312, FABRICATED STRUCTURAL METAL MFG	
Companies ¹ number	2 867	—Con.	
All establishmentsnumber	3 040	Value added\$1,000	7 217 379
Establishments with 1 to 19 employees number Establishments with 20 to 99 employees number Establishments with 100 employees number number number	1 864 1 012 164	Total inventories, beginning of year \$1,000. Finished goods inventories, beginning of year \$1,000. Work-in-process inventories, beginning of year \$1,000. Materials and supplies inventories, beginning of year \$1,000.	1 667 384 378 028 624 873 664 483
All employeesnumber	92 512	Total inventories, end of year\$1,000	1 797 139
Total compensation2 \$1,000 Annual payroll \$1,000 Total fringe benefits \$1,000	3 638 849 2 940 742 698 107	Finished goods inventóries, end of year \$1,000. Work-in-process inventories, end of year \$1,000. Materials and supplies inventories, end of year \$1,000.	386 576 704 221 706 342
Production workers, average for yearnumber	66 990	Gross book value of total assets at beginning of year\$1,000	3 183 077
Production workers on March 15	65 995 66 409	Total capital expenditures (new and used)	294 145
Production workers on August 15number	67 504	(new and used)	71 481
Production workers on November 15 number	68 052	Capital expenditures for machinery and equipment (new	200 201
Production-worker hours	138 124	and used)\$1,000 Total retirements ² \$1,000	222 664 73 527
Production-worker wages\$1,000.	1 797 771	Gross book value of total assets at end of year\$1,000	3 403 695
Total cost of materials	8 995 169	Total depreciation during year ² \$1,000	192 311
Cost of materials, parts, containers, etc., consumed\$1,000	6 647 342	Total rental payments ² \$1,000. Buildings and other structures rental payments ² \$1,000.	190 977
Cost of resales \$1,000 Cost of fuels \$1,000	1 069 571 42 117	Buildings and other structures rental payments ² \$1,000. Machinery and equipment rental payments ² \$1,000.	114 893 76 084
Cost of purchased electricity\$1,000 Cost of contract work\$1,000	93 844 1 142 295	Cost of purchased services for the repair of buildings and other	
Cost of contract work		structures ³ \$1.000	23 793
Quantity of electricity purchased for heat and power	1 499 546	Response coverage ratio ⁴ percent Cost of purchased services for the repair of machinery and	72
, , ,		equipment ³ \$1.000	72 919
Total value of shipments	16 124 652	Response coverage ratio ⁴ percent Cost of purchased communications services ³ \$1,000.	72 21 045
Primary products value of shipments\$1,000 Secondary products value of shipments\$1,000	1 108 714	Response coverage ratio ⁴ percent.	21 045 72
Total miscellaneous receipts	1 570 458	Cost of purchased legal services ³ \$1,000	19 861
Value of resales\$1,000	1 186 474	Response coverage ratio ⁴ percent.	72
Contract receipts\$1,000 Other miscellaneous receipts\$1,000	332 399	Cost of purchased accounting and bookkeeping services ³ \$1,000 Response coverage ratio ⁴ percent.	13 796 72
Other miscellaneous receipts		Cost of purchased advertising services ³ \$1,000	14 750
Primary products specialization ratio	92 13 997 386	Response coverage ratio ⁴ percent	72
Value of primary products shipments made in this industry \$1,000	13 445 480	services ³ \$1.000	17 070
Value of primary products shipments made in other		Response coverage ratio ⁴ percent	72
industries\$1,000	551 906	Cost of purchased refuse removal (including hazardous waste) services ³ \$1,000.	6 380
Coverage ratio percent	96		72

Note: The amounts shown for purchased services reflect only those services that establishments purchase from other companies.

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²These items are collected in the ASM and estimated for the remaining establishments; therefore, the levels of estimation are higher than for other items in the table.

³Based on ASM sample data.

⁴A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those ASM establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

			All	All emp	oloyees	Pr	oduction work	ers				
Employment size class	E ¹	Total	With 20 em- ploy- ees or more	Number	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)	Value added by manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
332312, FABRICATED STRUCTURAL METAL MFG												
All establishments	1	3 040	1 176	92 512	2 940 742	66 990	138 124	1 797 771	7 217 379	8 995 169	16 124 652	294 145
Establishments with 1 to 4 employees	8	778	-	1 669	43 818	1 236	4 330	27 560	103 082	132 770	236 049	5 263
employees Establishments with 10 to 19	6	510	_	3 469	95 811	2 565	4 370	60 043	218 283	244 914	463 819	8 823
employees	2	576	-	8 166	250 012	5 856	11 195	147 535	596 275	663 863	1 262 518	22 458
employees Establishments with 50 to 99	1	708	708	22 212	719 066	15 686	31 881	413 027	1 759 795	2 179 078	3 931 467	72 309
employees	1	304	304	20 864	666 434	15 288	32 362	412 896	1 505 558	1 850 307	3 340 309	64 549
employees	-	129	129	19 925	626 422	14 483	29 359	388 765	1 620 433	2 041 757	3 615 896	72 188
employees	-	27	27	8 854	306 513	6 317	13 636	197 660	871 585	1 284 666	2 157 350	34 372
employees	-	5	5	3 263	103 752	2 249	4 142	55 948	229 570	275 934	505 743	7 522
employees Establishments with 2,500 employees	-	3	3	4 090	128 914	3 310	6 849	94 337	312 798	321 880	611 501	6 661
or more	-	_	_	-	-	_	-	_	_	-	-	_
Administrative records ²	9	1 015	_	4 239	98 274	3 145	4 790	61 685	212 695	287 349	500 797	10 613

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data eccount for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 70 to 79 percent; 8–80 to 89 percent or more.

²Some payroll and sales data for small single-unit companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes

Table 5. Industry Statistics by Industry and Primary Product Class Specialization: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

							-					
	NAICS	_		All employees		Production workers			Value added			Total capital
	industry or product class code	Industry or primary product class	estab- lish- ments	Number	Payroll (\$1,000)	Number	Hours (1,000)	Wages (\$1,000)	manufacture (\$1,000)	Cost of materials (\$1,000)	Value of shipments (\$1,000)	expendi- tures (\$1,000)
;	332312	Fabricated structural metal mfg	3 040	92 512	2 940 742	66 990	138 124	1 797 771	7 217 379	8 995 169	16 124 652	294 145
;	3323121	Fabricated structural metal bar joist										
	3323123	and concrete reinforcing bars Fabricated structural metal for	1 213	54 595	1 797 613	38 106	80 426	1 041 508	4 590 723	6 105 352	10 651 707	167 639
		bridges	59	3 270	107 640	2 568	5 514	72 748	273 108	255 305	528 604	11 832
	3323125	Other fabricated structural metal	389	22 625	706 257	17 421	36 016	475 120	1 609 208	1 746 746	3 312 718	81 323

Table 6a. Products Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

			19	997			19	992	
NAICS product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product	shipments Value (\$1,000)	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product	shipments Value (\$1,000)
332312	Fabricated structural metal	N	Х	X	13 997 386	N N	Х	X	(\$1,000) N
3323121	Fabricated structural metal bar joist and		^	^	10 001 000	"	^	^	
	concrete reinforcing bars	N	Х	Х	8 812 319	N	x	X	N
33231211	Fabricated structural iron and steel for industrial buildings, including metal bar joists, short span (open web)	N	~	V	2 402 207	, .	v	v	N.
3323121101	Fabricated structural iron and steel for industrial buildings, metal bar joists, short span (open web)	N 816	X X	x	3 102 387 3 102 387	N N	X X	X X	N N
33231212	Fabricated structural iron and steel for commerical, residential, institutional, and		V	V	F 505 070		V	V	
3323121206	public buildings Fabricated structural iron and steel for commerical buildings, including metal	N	Х	Х	5 585 872	N	X	Х	N
3323121211	bar joists, long span	795	Х	X	3 650 230	N	X	Х	N
3323121216	residential buildings, including metal concrete reinforcing bars	209	X	Х	948 594	N	×	Х	N
	institutional, medical, and religious buildings	274	Х	Х	329 006	240	x	Х	293 486
3323121221	Fabricated structural iron and steel for public and educational buildings	319	Х	Х	499 771	258	х	Х	339 666
3323121226	Fabricated structural iron and steel for public utilities	98	Х	Х	87 089	73	х	Х	83 131
3323121231	Fabricated structural aluminum for buildings (all types)	30	Х	Х	71 182	19	х	Х	48 312
3323121Y	Fabricated structural metal bar joists and concrete reinforcing bars, nsk	N	х	x	124 060	N	x	X	N
3323121YWV	Fabricated structural metal bar joists and concrete reinforcing bars, nsk	N N	X	X	124 060	N N	x	X	N
3323123	Fabricated structural metal for bridges	N	х	X	548 455	N	х	Х	512 226
33231231 3323123100	Fabricated structural metal for bridges	N 77	×	X X	548 455 548 455	N 99	X	X	N 512 226
3323125	Other fabricated structural metal	N	х	Х	3 151 733	N	x	Х	2 027 655
33231251	Other fabricated structural iron and steel, metal and aluminum	N	X	Х	2 785 589	N	x	X	N
3323125106	Fabricated structural iron and steel for transmission towers, substations, radio antenna towers, and supporting		^	,	2 703 303		^	^	
3323125111	structures	66	Х	Х	424 837	51	x	X	221 276
3323125111	offshore oil and gas platforms	35	Х	Х	626 639	15	x	X	295 937
3323125121	tunneling and subway work	13	Х	Х	31 537	7	x	X	32 695
3323125126	aerospace and defense	42	Х	Х	168 660	53	x	X	170 879
3323125131	steel	384	Х	Х	1 372 367	273	X	X	560 851
3323125136	ships, boats, barges, transmission towers, and other structures	31	х	х	92 769	28	x	X	52 239
	iron, steel, or aluminum	29	Х	Х	68 780	16	X	Х	12 354
33231252	Fabricated structural iron and steel for ships, boats, and barges	N	Х	Х	305 601	N	x	Х	N
3323125201	Fabricated structural iron and steel for ships, boats, and barges	39	Х	Х	305 601	45	х	Х	534 795
3323125Y 3323125YWV	Other fabricated structural metal, nsk	N N	×	X	60 543 60 543	N N	×	X	N 146 629
332312W	Fabricated structural metal, nsk, total	N	Х	Х	1 484 879	N	х	Х	N
332312WY 332312WYWW	Fabricated structural metal, nsk, total	N	Х	Х	1 484 879	N	х	Х	N
332312WYWY	nonadministrative-records establishments. Fabricated structural metal, nsk, for	N N	X	X	1 028 813	N	x	X	N
	administrative-records establishment	N	Х	Х	456 066	N	X	Х	N

Note: For some establishments, data have been estimated from central unit values which are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: P 10 to 19 percent estimated; Q 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

[#] Additional information is available for this item; see Appendix F.

@ Additional data are available for this item in the Current Industrial Report (CIR) series; see Appendix F for the CIR survey number and title.

\$ This product is primary to more than one industry; see Appendix F for a listing of the related product codes.

Table 6b. Product Class Shipments for Selected States: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product class	Product class and geographic area	Value of product shipmen (\$1,000)	ts
code		1997	1992
3323121	FABRICATED STRUCTURAL METAL BAR JOIST AND CONCRETE REINFORCING BARS		
	United States	8 812 319	N
	Alabama	362 859 2 134	N N
	Alaska	244 443	N
	Arkansas	189 758 611 910	N N
	Colorado	109 425	N
	Connecticut	44 350 40 300	N N
	Florida	307 915 187 936	N N
	Idaho	15 778	N
	Illinois Indiana	474 853 355 783	N N
	lowa	105 621	N
	Kansas	61 862 57 480	N
	Louisiana	72 716	N
	Maine	31 887 107 807	N N
	Massachusetts	76 333	N
	Michigan	320 411 139 663	N N
	Mississippi Missouri	151 023 235 563	N N
	Nebraska	106 600	Ň
	New Hampshire New Jersey	41 222 204 787	N N
	New Mexico	18 604	N
	New York	205 391 248 273	N N
	Ohio	352 627	N
	Oklahoma Oregon	169 779 113 877	N N
	Pennsylvania	594 329 9 405	N N
	South Carolina	412 028	N.
	South Dakota Tennessee.	25 564 277 511	N N
	Texas	812 631	N
	Utah	235 901 261 404	N N
	Washington	120 668	N
	West Virginia Wisconsin Wyoming	31 081 166 365 8 953	N N N
3323123	FABRICATED STRUCTURAL METAL FOR BRIDGES		
	United States	548 455	512 226
	AlabamaGeorgia	31 550 8 434	N N
	Illinois	14 466 19 398	N N
	Massachusetts	13 716	N N
	Nebraska	7 348	N
	Ohio	25 517 47 666	24 716 N
	Tennessee	10 276 29 348	N 31 992
	Washington	2 536	N
3323125	OTHER FABRICATED STRUCTURAL METAL		
	United States	3 151 733	2 027 655
	Alabama	55 615	31 202
	Arizona	10 378 7 119	6 728 4 037
	California	256 094 12 551	135 329 3 427
	Florida	70 263 84 378	18 151 21 503
	ldaho	6 544 129 968	N 69 792
	Indiana	86 034	43 811
	lowa	30 682 64 674	26 271 19 810
	Louisiana Maine	538 520 24 729	322 896 N
	Maryland	5 553	N
	Massachusetts	10 071	33 048
	Michigan	67 353 9 239	22 338 16 470
	Mississippi Missouri	27 922 34 387	58 768 30 338
	Montana	4 019	30 330 N
	Nebraska New Jersey	17 258 16 898	9 336 14 981
	New Mexico	4 956	2 025
	New York	72 727	28 845

Table 6b. Product Class Shipments for Selected States: 1997 and 1992—Con.

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product class	Product class and geographic area	Value of product shipments (\$1,000)				
code	Ů Ů .	1997	1992			
3323125	OTHER FABRICATED STRUCTURAL METAL—Con.					
	North Carolina Ohio Oklahoma Oregon Pennsylvania	223 499 81 339 57 715	N 80 774 48 870 39 986 71 773			
	South Carolina Tennessee Texas Utah Virginia	41 156 456 919 19 131	50 057 33 288 132 092 38 760 11 620			
	Washington	7 653	19 693 N 24 199			

Table 7. Materials Consumed by Kind: 1997 and 1992

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS		19	97	19	992
material code	Material consumed	Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
332312	FABRICATED STRUCTURAL METAL MFG				
33290005 33291905 332000A3	Fabricated metal pipe (except castings and forgings)	X	112 343 26 057	X X	N N
33200039 33151001	(except castings and forgings) All other fabricated metal products (except castings and forgings) Iron and steel castings (rough and semifinished)	X X X	D 666 626 67 152	X X X	N N N
33152005 33152003 33210001 33120057	Aluminum and aluminum-base alloy castings (rough and semifinished) Other nonferrous castings (rough and semifinished) Forgings Steel bars and bar shapes (except concrete reinforcing bars, castings,	X X	8 181 D 5 968	X X X	N N N
33120009	forgings, and fabricated metal products) Steel concrete reinforcing bars	X	299 728 441 146	X	N N
33120017 33120079 33120041 33120047	Steel sheet and strip, including tin plate Steel plate Wide flange steel structural beams All other steel structural shapes (except sheet pilipps, castings, foreigns, and	X X X	607 768 488 041 761 267	X X X	N N N
33120039	All other steel structural shapes (except sheet pilings, castings, forgings, and fabricated steel products)	x x	667 403 297 675	X X	N N
33140003 33142135	Nonferrous refinery shapes (except castings, forgings, and fabricated metal products) Copper and copper-base alloy pipe and tube (except castings, forgings, and	х	1 189	X	N
33142141	fabricated metal products)	X	16 386	X	N
33131501 33100055	forgings, and fabricated metal products) Aluminum and aluminum-base alloy sheet, plate, foil, and welded tubing All other aluminum and aluminum-base alloy shapes and forms (except castings, forgings, and fabricated metal products)	X X	7 364 71 389 16 487	X X	N N
33100067 32551003	All other nonferrous shapes and forms (except castings, forgings, and fabricated metal products) Paints, varnishes, lacquers, stains, shellacs, japans, enamels, and allied	×	38 275	×	N
33399203 00970099 00971000	Praints, variishes, lacquers, stants, sheliacs, japans, enamels, and allied products Welding electrodes. All other materials and components, parts, containers, and supplies. Materials, ingredients, containers, and supplies, n.s.k.	X X X	160 742 66 467 739 465 1 067 030	X X X	X

[#] Additional information is available for this item; see Appendix F.

Note: For some establishments, data have been estimated from central unit values which are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: P 10 to 19 percent estimated; q 20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

[#] Additional information is available for this item; see Appendix F.

@ Additional data are available for this item in the Current Industrial Report (CIR) series; see Appendix F for the CIR survey number and title.

\$ This product is primary to more than one industry; see Appendix F for a listing of the related product codes.

Appendix A. Explanation of Terms

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method (FIFO, LIFO, market, to name a few). Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Stage of Fabrication

Total inventories and three detailed components (1) finished goods, (2) work-in-process, and (3) materials, supplies, fuels, etc., were collected.

When using inventory data by stage of fabrication for "all industries" and at the three-digit subsector level, it should be noted that an item treated as a finished product by an establishment in one industry may be reported as a raw material by an establishment in a different industry. For example, the finished-product inventories of a steel mill would be reported as raw materials by a stamping plant. Such differences are present in the inventory figures by stage of fabrication shown for all publication levels.

COST OF MATERIALS

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

Included in this item are:

- Cost of parts, components, containers, etc.—Includes all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year.
- Cost of products bought and sold in the same condition.

- Cost of fuels consumed for heat and power—Includes the cost of materials or fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
- 4. Cost of purchased electricity—The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.
- 5. Cost of contract work—This term applies to work done by others on materials furnished by the manufacturing establishment. The actual cost of the material is to be reported on the cost of materials, parts, and containers line of this item. The term "Contract Work" refers to the fee a company pays to another company to perform a service.

Specific Materials Consumed

In addition to the total cost of materials, which every establishment was required to report, information also was collected for most manufacturing industries on the consumption of major materials used in manufacturing. The inquiries were restricted to those materials which were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers' records. If less than \$25,000 of a listed material was consumed by an establishment, the cost data could be reported in the "Cost of all other materials...," Census material code 00970099. Also, the cost of materials for small establishments for which administrative records or short forms were used was imputed into the "Materials not specified by kind," Census materials code 00971000.

Duplication in Cost of Materials and Value of Shipment

The aggregate of the cost of materials and value of shipments figures for industry groups and for all manufacturing industries includes large amounts of duplication since the products of some industries are used as materials by others. This duplication results, in part, from the addition of related industries representing successive

1997 ECONOMIC CENSUS APPENDIX A A-1

stages in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to paper mills in the paper and allied products group of industries. Estimates of the overall extent of this duplication indicate that the value of manufactured products exclusive of such duplication (the value of finished manufactures) tends to approximate two-thirds of the total value of products reported in the survey.

Duplication of products within individual industries is significant within a number of industry groups, e.g., machinery and transportation industries. These industries frequently include complete machinery and their parts. In this case, the parts made for original equipment are materials consumed for assembly plants in the same industry.

Even when no significant amount of duplication is involved, value of shipments figures are deficient as measures of the relative economic importance of individual manufacturing industries or geographic areas because of the wide variation in ratio of materials, labor, and other processing costs of value of shipments, both among industries and within the same industry.

Before 1962, cost of materials and value of shipments were not published for some industries which included considerable duplication. Since then, these data have been published for all industries at the U.S. level and beginning in 1964, for all geographic levels.

COST OF PURCHASED SERVICES

Annual Survey of Manufactures (ASM) establishments were requested to provide information on the cost of purchased services for the repair of buildings and other structures, the repair of machinery, communication services, legal services, accounting and bookkeeping services, advertising, software and other data processing services, and refuse removal. Each of these items reflects the costs paid directly by the establishment and excludes salaries paid to employees of the establishment for these services.

Included in the cost of purchased services for the repair of buildings and machinery are payments made for all maintenance and repair work on buildings and equipment. Payments made to other establishments of the same company and for repair and maintenance of any leased property also are included. Extensive repairs or reconstruction that was capitalized is considered capital expenditures and is, therefore, excluded from this item. Repair and maintenance costs provided by an owner as part of a rental contract or incurred directly by an establishment in using its own work force also are excluded.

Included in the cost of purchased advertising services are payments for printing, media coverage, and other advertising services and materials.

Included in the cost of purchased software and other data processing services are all purchases by the establishment from other companies. Excluded are services provided by other establishments of the same company (such as by a separate data processing unit).

Included in the cost of purchased refuse removal services are all costs of refuse removal services paid by the establishment, including costs for hazardous waste removal or treatment. Excluded are all costs included in rental payments or as capital expenditures.

Response Coverage Ratio

A response coverage ratio is a measure of the extent to which respondents report for an item. The estimate is made by calculating the ratio value of the weighted total employment data for all the ASM establishments that report the item to the weighted total employment data for all ASM establishments classified in an industry (reporters and non-reporters).

DEPRECIATION CHARGES FOR FIXED ASSETS

This item includes depreciation and amortization charged during the year against assets. Depreciation charged against fixed assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation.

EMPLOYEES

This item includes all full-time and part-time employees on the payrolls of operating manufacturing establishments during any part of the pay period which included the 12th of the months specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average for the payroll periods including the 12th of March, May, August, and November.

Production Workers

This item includes workers (up through the line-supervisor level) engaged in fabricating, processing, assembling, inspecting, receiving, storing, handling, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial and guard services, product development, auxiliary production for plant's own use (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the manufacturing establishment including those engaged in factory supervision above the line-supervisor level. It

includes sales (including driver-salespersons), sales delivery (highway truck drivers and their helpers), advertising, credit, collection, installation and servicing of own products, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional, and technical employees. Also included are employees on the payroll of the manufacturing establishment engaged in the construction of major additions or alterations utilized as a separate work force.

FRINGE BENEFITS

Fringe benefits are divided into legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as companyoperated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS BOOK VALUE OF DEPRECIABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable assets is collected on all census forms. It shows the value of depreciable assets for the beginning of year and end of year. The data encompass all fixed depreciable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, and equipment (production, office, and transportation equipment) for which depreciation reserves are maintained. Excluded are nondepreciable capital assets including inventories and intangible assets, such as timber and mineral rights.

The definition of fixed depreciable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same line of goods, a separate report was requested for each location. If the company operated in two or more distinct lines of manufacturing at the same location, a separate report was requested for each activity.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating manufacturing establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of manufacturing establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

The ASM provides estimates of employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each

product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	33461	Manufacturing and reproduction of magnetic and optical media
U.S. industry	334612	Reproduction of software
Product class	3346120	Prerecorded compact disc (except software), tape, and record reproducing
BLS link code	3346120X	_
Product code	3346120XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the 1997 census program, information was collected on the output of almost 10,000 individual product items.

In the new system, there are about 1,500 product classes (seven-digit codes), about 6,000 census products (ten-digit codes), and an additional 3,700 CIR products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments information were collected. However, if quantity was not significant or could not be reported by manufacturers, only value of shipments was collected.

Shipments include both commercial shipments and transfers of products to other plants of the same company. For industries in which a considerable portion of the total shipments is transferred to other plants of the same company, separate information on interplant transfers also was collected. Moreover, for products that are used to a large degree within the same establishment as materials or components in the fabrication of other products, total production and often consumption of the item within the plant (quantity produced and consumed) was collected. Typically, the information on production also was collected for products for which there are significant differences between total production and shipments in a given year because of wide fluctuations in finished goods inventories. Other measures of output of products with long production cycles were used as appropriate and feasible.

PRIMARY PRODUCT CLASS CODE

This file presents selected statistics for establishments according to their degree of specialization in products primary to their industry. This field contains either the six-digit North American Industrial Classification System (NAICS) industry code corresponding to all establishments in the industry, or the seven-digit NAICS product class code for all establishments within the industry that are specialized in a particular product class. Product class specialization is determined by evaluating the ratio of the largest primary product class shipments to total product shipments (primary plus secondary, excluding miscellaneous receipts) for the establishment.

PRODUCTION-WORKER HOURS

This item covers hours worked or paid for at the plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the cost of purchased electric energy were collected on all census forms. However, data on the quantity of purchased electric energy were collected only on the Annual Survey of Manufactures (ASM) form. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. However, the breakdown between rental payments for buildings and other structures and rental payments for machinery and equipment is collected only on the ASM forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these companyowned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

TOTAL CAPITAL EXPENDITURES (NEW AND USED)

For establishments in operation and any known plants under construction, manufacturers were asked to report their new and used expenditures for (1) permanent additions and major alterations to manufacturing establishments and (2) machinery and equipment used for replacement and additions to plant capacity if they were of the type for which depreciation accounts were ordinarily maintained.

Totals for expenditures include the costs of assets leased from nonmanufacturing concerns through capital leases. New facilities owned by the Federal Government but operated under contract by private companies and plant and equipment furnished to the manufacturer by communities and nonprofit organizations are excluded. Also excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

VALUE ADDED

This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments (products manufactured plus receipts for services rendered). The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of merchandise sold without further manufacture, processing, or assembly) plus the net change in finished goods and work-in-process between the beginning-and end-of-year inventories.

For those industries where value of production is collected instead of value of shipments, value added is adjusted only for the change in work-in-process inventories between the beginning and end of year. For those

industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

"Value added" avoids the duplication in the figure for value of shipments that results from the use of products of some establishments as materials by others. Value added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

VALUE OF SHIPMENTS

This item covers the received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as receipts for contract work performed for others, installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all items made by or for the establishments from material owned by it, whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of "all other costs" (including company overhead) and profit.

In addition to the value for NAICS defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment's value of product shipments:

- 1. Reported contract work—Receipts for work or services that a plant performed for others on their materials.
- 2. Value of resales—Sales of products brought and sold without further manufacture, processing, or assembly.
- 3. Other miscellaneous receipts—Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. These components are:

- 1. Primary products value of shipments.
- 2. Secondary product value of shipments.
- 3. Total miscellaneous receipts.

Primary product shipments is used in the calculations of industry specialization ratio and industry coverage ratio. The term "Value of primary products shipments made in this industry" is used in this publication and refers to the same data.

1997 ECONOMIC CENSUS APPENDIX A A-5

Duplication in Cost of Materials and Value of Shipment

The aggregate of the cost of materials and value of shipments figures for industry groups and for all manufacturing industries includes large amounts of duplication since the products of some industries are used as materials by others. This duplication results, in part, from the addition of related industries representing successive stages in the production of a finished manufactured product. Examples are the addition of flour mills to bakeries in the food group and the addition of pulp mills to paper mills in the paper and allied products group of industries. Estimates of the overall extent of this duplication indicate that the value of manufactured products exclusive of such duplication (the value of finished manufactures) tends to approximate two-thirds of the total value of products reported in the annual survey.

Duplication of products within individual industries is significant within a number of industry groups, e.g., machinery and transportation industries. These industries frequently include complete machinery and their parts. In this case, the parts made for original equipment are materials consumed for assembly plants in the same industry.

Even when no significant amount of duplication is involved, value of shipments figures are deficient as measures of the relative economic importance of individual manufacturing industries or geographic areas because of the wide variation in ratio of materials, labor, and other processing costs of value of shipments, both among industries and within the same industry.

Before 1962, cost of materials and value of shipments were not published for some industries which included considerable duplication. Since then, these data have been published for all industries at the U.S. level and beginning in 1964, for all geographic levels.

Specialization and Coverage Ratios

These items are not collected on the report forms but are derived from the data shown in Table 3. An establishment is classified in a particular industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment's shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.). Specialization and coverage ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in Tables 1a through 5 and data on product shipments shown in Tables 6a and 6b.

Specialization ratio represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

Coverage ratio represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments wherever classified.

Appendix B. NAICS Codes, Titles, and Descriptions

332312 FABRICATED STRUCTURAL METAL MANUFACTURING

This U.S. industry comprises establishments primarily engaged in fabricating structural metal products, such as concrete reinforcing bars and fabricated bar joists.

The data published with NAICS code 332312 include the following SIC industries:

3441 Fabricated structural metal 3449 Miscellaneous metal work (pt)

Appendix C. Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The manufacturing universe includes about 400,000 establishments. This number includes those industries in the North American Industry Classification System (NAICS) definition of manufacturing, but not those industries leaving the manufacturing sector in the classification change. The amounts of information requested from manufacturing establishments were dependent upon a number of factors. The more important considerations were the size of the company and whether it was included in the annual survey of manufactures (ASM). The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

 Small single-establishment companies not sent a report form.

Approximately 40 percent of the manufacturing establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cutoff was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cutoff that could be directly assigned a six-digit NAICS code were excused from filing any report. For below cutoff establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements that safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and cost of materials were not distributed among specific products and materials for these

establishments but were included in the product and material "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously re-coded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between manufacturing and nonmanufacturing activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census – Manufacturing, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as "All other" industries within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into three groups:

a. ASM sample establishments.

This group accounts for approximately 15 percent of all manufacturing establishments. The ASM panel covers all the units of large manufacturing establishments as well as a sample of the medium and smaller establishments. The probability of selection was proportionate to size. For more information, see the Description of the ASM Survey Sample.

MANUFACTURING APPENDIX C C-1

In an economic census year, the ASM report form (MA-1000) replaces the first page of the regular census form for those establishments included in the ASM. In addition to information on employment, payroll, and other items normally requested on the regular census form, establishments in the ASM sample were requested to supply additional information on gross book value of assets and capital expenditures. ASM establishments were also requested to provide information on retirements, depreciation, rental payments, and supplemental labor costs. For establishments not included in the ASM, these additional items were estimated using relationships observed in the ASM establishment data. The census statistics for these variables are a sum of the ASM establishment data and the estimated data for non-ASM establishments. ASM establishments were also requested to provide information for selected purchased services. The census statistics for the purchased service items were derived solely from the ASM establishments. See Appendix A, Explanation of Terms for an explanation of these items. The census part of the report form is 1 of 220 versions containing product, material, and special inquiries. The diversity of manufacturing activities necessitated the use of this many forms to canvass the 480 manufacturing industries. Each form was developed for a group of related industries.

Appearing on each form was a list of products primary to the group of related industries as well as secondary products and miscellaneous services that establishments classified in these industries were likely to perform. Respondents were requested to identify the products, the value of each product, and, in many cases, the quantity of the product shipped during the survey year. Space also was provided for the respondent to describe products not specifically identified on the form.

The report form also contained a materials-consumed inquiry which varied from form to form depending on the industries being canvassed. The respondents were asked to review a list of materials generally used in their production processes. From this list, each establishment was requested to identify those materials consumed during the survey year, the cost of each, and, in certain cases, the quantity consumed. Once again, space was provided for the respondent to describe significant materials not identified on the form.

A wide variety of special inquiries was included to measure activities peculiar to a given industry, such as operations performed and equipment used.

b. Large and medium establishments (non-ASM).

Approximately 30 percent of all manufacturing establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 220 economic census – manufacturing regular forms. The first page, requesting establishment data for items such as employment and payroll, was standard but did not contain the detailed statistics included on the ASM form. The product, material, and special inquiry sections supplied were based on the historical industry classification of the establishment.

c. Small single-establishment companies (non-ASM).

This group includes approximately 15 percent of all manufacturing establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. These establishments received 1 of the 31 versions of the short form, which requested summary product and material data and totals but no details on employment, payroll, cost of materials, inventories, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products and materials consumed was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Manufacturing was classified in 1 of 480 industries (473 manufacturing industries and 7 former manufacturing industries) in accordance with the industry definitions in the 1997 NAICS Manual. This is the first edition of the NAICS Manual and it is a major change from the 1987 SIC Manual that was used previously. Appendix A of the 1997 NAICS Manual notes the comparability between the 1987 SIC and 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product class and product comparability between the two systems for data in this report.

In the NAICS system, an industry is generally defined as a group of establishments that have similar production processes. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of number, value added by manufacture, value of shipments, and number of employees.

C-2 APPENDIX C MANUFACTURING

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the manufacturing sector for 1997, there are 21 subsectors (three-digit NAICS), 86 industry groups (four-digit NAICS), 184 NAICS industries (five-digit NAICS) that are comparable with Canadian and Mexican classification, and 473 U.S. industries (six-digit NAICS). This represents an expansion of the four-digit SICbased U.S. industries from 459 in 1987. Product classes and products of the manufacturing industries have been assigned codes based on the industry from which they originate. In the new system, there are about 1,500 product classes (seven-digit codes), about 6,000 census products, and an additional 3,700 CIR products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits. These counts do not include the seven former manufacturing industries that are included in the 1997 Economic Census - Manufacturing.

For the 1997 Economic Census – Manufacturing, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value. For 1997, there were no "resistance rules" or "frozen industries."

In ASM years, establishments included in the ASM sample with certainty weights are reclassified by industry only if the change in the primary activity from the prior year is significant or if the change has occurred for 2 successive years. This procedure prevents reclassification when there are minor shifts in product mix.

In ASM years, establishments included in the ASM sample with noncertainty weight are not shifted from one industry classification to another. They are retained in the industry where they were classified in the base census year. However, in the following census year, these ASM plants are allowed to shift from one industry to another.

The results of these rules covering the switching of plants from one industry classification to another are that some industries comprise different mixes of establishments in different survey years. Hence, comparisons between prior-year and current-year published totals, particularly at the six-digit NAICS level, should be viewed with caution. This is particularly true for the comparison between the data shown for a census year versus the data shown for the previous ASM year.

As previously noted, the small establishments that may have been misclassified by industry are usually administrative-record cases whose industry codes were assigned on the basis of incomplete descriptions of the general activity of the establishment. Such possible misclassifications have no significant effect on the statistics other than on the number of companies and establishments.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by manufacture, value of shipments, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics, especially the value of shipments, to the product statistics, the composition of the industry's output should be considered.

The extent to which industry and product statistics may be matched with each other is measured by the primary product specialization ratio and the coverage ratio. The primary product specialization ratio is the proportion of industry shipments accounted for by the primary products of establishments classified in the industry. The coverage ratio is the proportion of product shipments accounted for by establishments classified in the industry.

ESTABLISHMENT BASIS OF REPORTING

The economic census – manufacturing is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each location or establishment. The ASM also is conducted on an establishment basis, but separate reports are filed for just those establishments selected in the sample. Companies engaged in distinctly different lines of activity at one location are requested to submit separate reports if the plant records permit such a separation and if the activities are substantial in size.

In 1997, as in earlier years, a minimum size limit was set for inclusion of establishments in the census. All establishments employing one person or more at any time during the census year are included. The same size limitation has applied since 1947 in censuses and annual surveys of manufactures. In the 1939 and earlier censuses, establishments with less than \$5,000 value of products were excluded. The change in the minimum size limit in 1947 does not appreciably affect the historical comparability of the census figures except for data on number of establishments for a few industries.

The 1997 Economic Census – Manufacturing excludes data for central administrative offices (CAOs). These would include separately operated administrative offices, warehouses, garages, and other auxiliary units that service manufacturing establishments of the same company. These data are published in a separate report series.

DESCRIPTION OF THE ASM SURVEY SAMPLE

The annual survey of manufactures (ASM) sample is drawn for the second survey year after a census. The most recent sample was drawn for the 1994 survey year based on the 1992 Census of Manufactures. This sample will be in place through the 1998 ASM.

MANUFACTURING APPENDIX C C-3

In 1992, there were approximately 370,000 individual manufacturing establishments. For sample efficiency and cost considerations, the 1992 manufacturing population was partitioned into two components for developing estimates within the ASM; a mail stratum and a nonmail stratum.

Mail stratum. The mail stratum of the survey is comprised of larger single-location manufacturing companies and all manufacturing establishments of multiunit companies (companies that operate at more than one physical location). Approximately 230,000 of the 370,000 establishments in the 1992 census were assigned to the mail stratum. On an annual basis, the mail stratum is supplemented with larger, newly active single-location companies identified from a list provided by the Internal Revenue Service (IRS) and new manufacturing locations of multiunit companies identified from the Census Bureau's Company Organization Survey (COS).

For the 1994 survey, a new sample of approximately 58,000 individual establishments was selected from the mail stratum assembled from the 1992 census. Supplemental samples representing both 1993 and 1994 births (newly active establishments that were not included in the 1992 census) were also selected. Establishments selected for the sample are mailed an ASM survey questionnaire for each year through 1998.

The 1994-98 ASM sample design is similar to the one used since 1984. Companies in the 1992 Census of Manufactures with manufacturing shipments of at least \$500 million were defined as company certainties. For these large companies, each manufacturing establishment is included in the mail sample. For the 1994-98 sample, there are approximately 650 certainty companies collectively accounting for over 18,000 establishments.

For the remaining portion of the mail component of the survey, the establishment was defined as the sample unit. All establishments with 250 employees or more were defined as employment certainties. In addition, all establishments producing products in SIC 3571 (Electronic Computers) were defined as certainties. Across these three arbitrary certainty classes, there were approximately 25,000 establishments included in the sample with certainty. Collectively, these certainty establishments accounted for approximately 80 percent of the total value of shipments in the 1992 Census of Manufactures.

Smaller establishments in the remaining portion of the mail stratum were sampled with probabilities ranging from .02 to 1.00. The initial probabilities of selection assigned to these establishments were proportionate to a measure-of-size determined for each establishment. The measure-of-size was a function of the establishment's 1992 industry classification, its 1992 product class data, and the historical variability of the year-to-year estimates of the product class estimates. For each product class (1,755) and four-digit industry (459), a desired reliability

constraint was specified. Using a technique developed by Dr. James R. Chromy of the Research Triangle Institute, the initial establishment probabilities were optimized such that the expected sample satisfied all industry and product class reliability constraints while the sample size was minimized. This technique reduces the likelihood of selecting nonrepresentative samples for individual product classes or industries.

This method of assigning probabilities based on product class shipments is motivated by our primary desire to produce reliable estimates of both product class and industry shipments. The high correlation between shipments and employment, value-added, and other general statistics assures that these variables will also be well represented by the sample. The actual sample selection procedure uses an independent chance of selection method (Poisson sampling) which permits us to prevent small establishments from being selected in consecutive samples without introducing a bias into the survey estimates.

Nonmail component. The initial nonmail component of the survey was comprised of approximately 140,000 small, single-establishment companies that were tabulated as administrative records in the 1992 Census of Manufactures. The nonmail stratum is also supplemented annually using the list of newly active single-location companies provided by the Internal Revenue Service (IRS) and payroll cutoffs. Companies with payroll below the payroll cutoff are added to the nonmail stratum. For this portion of the population, sampling is not used. The data for this group are estimated based on selected information obtained annually from the administrative records of the IRS and Social Security Administration (SSA). This administrative information, which includes payroll, total employment, industry classification, and physical location, is obtained under conditions which safeguard the confidentiality of both tax and census records.

DESCRIPTION OF THE ASM ESTIMATING PROCEDURE

Most of the ASM estimates derived for the mail stratum are computed using a difference estimator. At the establishment level, there is a strong correlation between the current-year data values and the corresponding 1992 (base) data values. Therefore, within the mailed stratum, for each item at each level of aggregation, an estimate of the "difference" between the current year and the base year is computed from sample cases and added to the corresponding base-year values. For the 1993-1997 ASM estimates, the 1992 Census of Manufactures values serve as the base year. For the 1998 ASM, the base will be updated to be the 1997 Economic Census – Manufacturing.

Due to the positive year-to-year correlation, estimates derived using this methodology are generally more reliable than comparable estimates developed from the current sample data alone. Estimates for the capital expenditures variables are not generated using the difference

C-4 APPENDIX C MANUFACTURING

estimator because the year-to-year correlations are considerably weaker. The standard linear estimator is used for these variables.

For the nonmail stratum, estimates for payroll and employment are directly tabulated from the administrative-record data provided by IRS and SSA. Estimates of data other than payroll and employment are developed from industry averages. Although the nonmail stratum contains approximately 170,000 individual establishments in 1994, it accounts for less than 2 percent of the estimate for total value of shipments at the total manufacturing level.

Corresponding estimates for the mail and nonmail components are combined to produce the estimates included in this publication.

QUALIFICATIONS OF THE ASM DATA

The estimates developed from the sample are apt to differ somewhat from the results of a survey covering all companies in the sample lists but otherwise conducted under essentially the same conditions as the actual sample survey. The estimates of the magnitude of the sampling errors (the difference between the estimates obtained and the results theoretically obtained from a comparable, complete-coverage survey) are provided by the standard errors of estimates.

The particular sample selected for the ASM is one of many similar probability samples that, by chance, might have been selected under the same specifications. Each of the possible samples would yield somewhat different sets of results, and the standard errors are measures of the variation of all the possible sample estimates around the theoretically comparable, complete-coverage values.

Estimates of the standard errors have been computed from the sample data for selected ASM statistics in this report. They are represented in the form of relative standard errors (the standard errors divided by the estimated values to which they refer).

In conjunction with its associated estimate, the relative standard error may be used to define confidence intervals (ranges that would include the comparable, completecoverage value for specified percentages of all the possible samples).

The complete-coverage value would be included in the range:

From one standard error below to one standard error above the derived estimate for about two-thirds of all possible samples.

From two standard errors below to two standard errors above the derived estimate for about 19 out of 20 of all possible samples.

From three standard errors below to three standard errors above the derived estimate for nearly all samples.

An inference that the comparable, complete-survey result would be within the indicated ranges would be correct in approximately the relative frequencies shown. Those proportions, therefore, may be interpreted as defining the confidence that the estimates from a particular sample would differ from complete-coverage results by as much as one, two, or three standard errors, respectively.

For example, suppose an estimated total is shown at 50,000 with an associated relative standard error of 2 percent, that is, a standard error of 1,000 (2 percent of 50,000). There is approximately 67 percent confidence that the interval 49,000 to 51,000 includes the complete-coverage total, about 95 percent confidence that the interval 48,000 to 52,000 includes the complete-coverage total, and almost certain confidence that the interval 47,000 to 53,000 includes the complete-coverage total.

In addition to the sample errors, the estimates are subject to various response and operational errors: errors of collection, reporting, coding, transcription, imputation for nonresponse, etc. These operational errors also would occur if a complete canvass were to be conducted under the same conditions as the survey. Explicit measures of their effects generally are not available. However, it is believed that most of the important operational errors were detected and corrected during the Census Bureau's review of the data for reasonableness and consistency. The small operational errors usually remain. To some extent, they are compensating in the aggregated totals shown. When important operational errors were detected too late to correct the estimates, the data were suppressed or were specifically qualified in the tables.

As derived, the estimated standard errors included part of the effect of the operational errors. The total errors, which depend upon the joint effect of the sampling and operational errors, are usually of the order of size indicated by the standard error, or moderately higher. However, for particular estimates, the total error may considerably exceed the standard errors shown. Any figures shown in the tables in this publication having an associated standard error exceeding 15 percent may be combined with higher level totals, creating a broader aggregate, which then may be of acceptable reliability.

DATA FROM THE CURRENT INDUSTRIAL REPORTS (CIR)

The CIR program provides product statistics for selected manufacturing industries at the U.S. level annually and, in some cases, monthly and/or quarterly. When detail product data are collected in the CIR, they are not also collected in the census. However, the annual CIR data are included in the census Product Summary report.

The CIR program uses a unified data collection, processing, and publication system. The Census Bureau updates the survey panels for most reports annually and reconciles the estimates to the results of the broader-based annual survey of manufactures and the economic

census – manufacturing. The economic census – manufacturing provides a complete list of all producers of the products covered by the CIR program and serves as the primary source for CIR sampling. Where a small number of producers exist, CIR surveys cover all known producers of a product. However, when the number of producers is large, cutoff and random sampling techniques are used. Surveys are continually reviewed and modified to provide the most up-to-date information on products produced. While the CIR program includes both mandatory and voluntary surveys, the annual data are mandatory.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Manufacturing shows value of shipments data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment.

C-6 APPENDIX C MANUFACTURING

Appendix D. Geographic Notes

Not applicable for this report.

1997 ECONOMIC CENSUS APPENDIX D D-1

Appendix E. Metropolitan Areas

Not applicable for this report.

1997 ECONOMIC CENSUS APPENDIX E E-1

Appendix F. Footnotes for Products Statistics and Materials Consumed by Kind

Not applicable for this report.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

Section Sect	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
Section Sect	3321111				3469989				
32211111	3321111206			3321165361	3469971		3322127111	3423621	3423621
\$20,000 \$46,000 \$46,000 \$20,000 \$46,000 \$46,000 \$40,	3321111311			3321165YWV	3469900	3469900	3322127116	3423631	3423631
\$2011 \$460 \$460 \$2021 \$46000 \$46000 \$2022 \$16000 \$79982 \$7998	3321111YWV				34690 pt	34690 pt	3322127131	3423681	3423681
2011 2011	3321113	34626	34626		3469000 pt				
\$46000 \$	3321113101	3462611	3462611			·	3322127199	3423698	3423698
32211 1979 3462700 346270 32211 1970 346270 346270 346270 346270 346271	3321113111		3462616	·	·	·			
32011 (16) 34677 346770 346770 320117011 346656 346666 32011707W 346770 346770 346770 320117010 3466701 3466710 320117010 3466701 3466710 320117010 3466701 3466701 320117010 3466701 3466701 320117010 3466701 3466701 320117010 3466701 3466701 320117010 3466701 3466701 320117010 3466701 3466701 320117010 3466701 34	3321113YWV	3462600	3462600	3321170106	3499633		3322127YWV pt	3524100 pt	3524100 pt
32211100.0 346270.0 346270.0 3221170401 349811 349811 349811 3521120 352020 352020 352011770.0 346281 3462812 33211707047 3498000 3402810 332212010.5 354511 354511 352017170.0 3462811 3462812 33211707047 3498000 3402810 34				3321170211	3499655			•	
Section Sect	3321115106	3462716		3321170401	3499611			35455	35455
1965 1966	3321115YWV	3462700	3462700				3322129 pt		
322111700, 342816 342616 322111700, 34200 322111700, 34211 3221111 32211	3321117			3321170YWW pt	3499000 pt	3499000 pt	3322129106	3545513	3545513
32211 W. 94600 34200 332211 pt 3211 pt 3211 pt 3221 pt	3321117106						3322129111	3545515 3545517	
32211 (PVWW) 3460000 3460000 3460000 3460000 3460000 3460000 3460000 3460000 3460000 3460000 3460000 3460000 3460000 3460000 3460000 3460000 3460000 346000		3462800	3462800		•	·	3322129121	3545521	3545521
322119/WWY 346300 346307 32211101 33440 3211101 3221204 3221204 354577 3545077 3545077 32212101 346327 346357 3463	332111W			·			3322129126	3545565	
322112101 346550 346550 332211101 3421404 394470 pt 32212040 3545779 3545779 352121111 342525 3465525 332211101 342110 3421101 3421204 3445525 3465525 3465525 332211101 342110 342120 3421204 3445525 3465525 3465525 3421101 3421101 342120 3421204 342120 3	332111WYWY			3322111 pt	39141 pt	39141 pt	3322129146	3545577	3545577
322112101	3321121			3322111 pt	39142 pt		3322129236	3545571	3545571
32211271W 346300 346520 332211720 32211720 32212W pt 350920 pt 350	3321121101			3322111103	3914245	3914270 pt	3322129341		
3221127WW 346500 346300 322113131 3221155 32212W pt 35230 pt 35230 pt 35230 pt 35211220 3463915 3463910 3463915 3463910 3463915 3463910 3463915 3463910 346391	3321121311	3463525	3463525		3914155	3914170 pt	3322129YWV pt	3545500	3545500
32211222. 34639 34639 332211336 3421157 3421157 332212Vpt 3520 pt 3520 pt 3520 pt 352112706 3463915 3463915 3463915 3421150 344881 34	3321121316 3321121YWV			3322111222	3421130	3421130		•	
332112/01				3322111326	3421153		332212W pt	34230	34230
3221121/1 3463935 346390 34711/W P 34710 3	3321122101	3463915	3463915	3322111336	3421157	3421157	332212W pt	35230 pt	35230 pt
332112WWW 346300 346300 332211WW pt 342100 32212W pt 36990 pt 36990 pt 332112WWW 346300 346300 332211WW pt 346300 332212W pt 36990 pt 36990 pt 332112WWW 346300 346300 332211311 342105 342105 332212W pt 37990 pt 37990 pt 3321140 pt 34690 pt 34690 pt 34690 pt 34690 pt 32211311 342105 342105 342216 332212W pt 37990 pt 37990 pt 3221140 pt 34690 pt 34690 pt 34690 pt 32211311 342105 342105 342216 332212W pt 37990 pt 3221140 pt 34690 pt 34690 pt 32211311 3421216 3421216 332212W pt 34690 pt 34690 pt 32211311 3421216 3421216 34221216 3422120 pt 34690 pt 3				3322111455			332212W pt	35240 pt	35240 pt
3321140/WW 346300 346300 32211310 32212 34210 332212W pt. 36990 pt 36990 pt 3291311 342100 342101 344801 34				3322111YWV pt			332212W pt	35450 pt	35450 pt
3321140PW 3469002 3469002 3322113101 3421206 3421210 332212W Pt 37990 pt 39990 pt 332140 pt 34490 pt 332213110 3421216 3421216 3421210 332212W pt 342900 342200 332212W pt 342900 342200 3322140 pt 342900 342200 34	332112W			·		·	332212W pt	36990 pt	36990 pt
3221140 P. 34490 pt 332213116 3421216 3421216 332212W J 39800 pt 39800 pt 39800 pt 32214016 3421			3463000 3463002					·	
3321140 Pt. 34498 34498 34498 34210 342100 342100 342100 32210 WWW pt. 342000 342000 pt 332140026 3449811 3449811 3449813 342911 9t 34210 34210 332212 WWW pt. 3322000 pt 3323000 pt 332140026 3449813 3449815 3449815 3449815 3449815 3449815 3449815 3449815 3449815 3449815 3449815 3449816 33221 WWW pt. 342000 pt. 3524000 pt. 352400				3322113106	3421210	3421210		·	
3321140010 3448811 3448811 3448811 332211W pt. 34210 34210 332212WWW pt. 352000 pt. 3545000 pt. 354500	·	·	•	3322113YWV	3421200		332212W pt		
3221140011 3448915 3448915 32221W p. 39140 p. 38140 p. 32222WVW pt 3545000 pt 3545000 pt 322140VW pt 344500 pt 344500 pt 32214VWW pt 344500 pt 34500 pt 32214VWW pt 344500 pt 34500 pt 345	3321140101	3449811	3449811	332211W pt	34210	34210	332212VV Y VV VV pt	3523000 pt	
3321140416 3449817 3449817 3449817 332211WYWW pt 342100 342100 342100 342100 pt 399000 pt 399000 pt 3421000 pt 342100 pt 342100 pt 399000 pt 342100 pt 34210 pt 3	3321140311	3449815					332212WYWW pt	3545000 pt	3545000 pt
3321140/WW pt 3449800 3449800 332211W/W pt 3421002 pt 3421002 pt 332212W/WW pt 349900 pt 349900 pt 3322118U pt 346800 3322119L 34231 34231 34231 332212W/W pt 345002 pt 3554002				332211WYWW pt	3421000	3421000	332212WYWW pt	3699000 pt	
3321150 pt. 34660 34661 322121 pt. 39999 pt 392140VVV pt 3522002 pt 3523002 pt 3523000 pt 352300 pt 3523	3321140YWW pt	3449800	3449800	332211WYWV pt	3914000 pt		1 332212\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	3999000 pt	3999000 pt
3321150 pt. 34661 34661 34661 322121 pt. 39290 pt 332212W/WY pt 352002 pt. 3545002 pt. 3545002 pt. 3321150 pt. 34661 34661 34661 322121 pt. 3999 pt. 3321150 pt. 3466105 3466105 3466105 342610 342211 342311 342311 332212W/WY pt. 3545002 pt. 3545002 pt. 3321150 pt. 3466105 3466105 3466105 342610 342211 342311 342311 332212W/WY pt. 359002 pt. 3799002 pt. 3221150 pt. 3466105 3466105 3426100 332212106 342311 342311 342311 332213W/WY pt. 399902 pt. 3999002 pt. 3221150103 pt. 3466200 pt. 3466230 3322121351 342314 342314 3322130 34250 34250 3321150103 pt. 3466230 st. 322121351 342314 342314 3322130 34250 34250 3321150103 pt. 3466230 3322121351 342315 342315 33213010 342501 342501 342511 342315 342315 342315 342315 342315 342315 342315 342315 342315 342315 342315 342315 342315 342315 342315 342315 342315 342315 342315 342511 342315 342315 342315 342315 342510 542510 342511 342511 342315 342515 342315 342515 342315 342516 342315 342516 342315 342516 342315 342516 342315 342516 3		·	·	332211WYWY pt	3914002 pt	3914002 pt	1 332212WYWY nt	3523002 pt	
3321150 pt. 34662 34662 332212101 342311 33221133 332212WWY pt 3789002 pt 3789002 pt 339150101 3466105 3466105 33221206 3423113 3423113 332212WWY pt 3789002 pt 3789002 pt 33915010 pt 3466200 pt 3466200 332212101 342311 3423113 332213WWY pt 3899002 pt 3999002 pt 3321150103 pt 3466200 pt 3466230 332212551 342311 3423111 3322130101 342501 342501 342501 342501 342501 pt 3466230 332212551 342315 342314 342314 3322130101 342501 342501 342501 342501 pt 3466230 pt 3466230 332212551 342315 342314 342314 3322130101 342501 342501 342501 342501 pt 346620 pt 3466230 332212551 342315 342315 342315 342315 342510 pt 346620 pt 346622 332212355 342315 342315 342315 342510 pt 346610 3466100 332212339 3423197 399909 pt 3322130116 3425016 3425018 3425018 342515	·			3322121 pt	34231	34231	332212WYWY pt	3524002 pt	
3321150/101 3466105 3466105 3322121206 3423113 3423121 33221200. 342510 342501 3425101	·				39999 pt		332212WYWY pt	3699002 pt	3699002 pt
3321150103 pt	3321150 pt				3423112		332212WYWY pt	3799002 pt	
3321150103 pt 3466200 pt 346623	3321150103 pt	3466200 pt	3466200	3322121311	3423121	3423121		•	
3321150106 pt 3466123 pt 3466122 3322121361 3423155 3423155 3421310 3423115 3425116 3425016 3425016 3321150106 pt 3466123 pt 3466102 3322121399 3423197 399999 pt 332213011 3425013 3425016 3425016 3425016 3425016 3425017 342511 342313					3423141		3322130101	3425011	3425011
3321150YWW pt 3466000 3426100 3322121399 3423197 3423107 3322130116 3425018 3425018 3425018 3425019 3425011 3425011 346602 346602 346602 3425021 3423133 3322130226 3425035 3425035 3425036 34	3321150106 pt	3466123 pt	3466120	3322121361	3423155	3423155			3425013 3425016
3321150YW pt	3321150YWW pt	3466000	3466000	3322121399	3423197	3423197	3322130116	3425018	3425018
3321161. 34692. 34692. 3322121426. 3423136. 3423136. 3322130231. 3425036. 3425036. 332161101. 3469201. 3469201. 3322121426. 3423138. 3423137. 3322130244. 3425039. 3425039. 332161115. 3469215. 3469205. 3469205. 3322121443. 3423139. 3423138. 3322130244. 3425039. 3425034. 332161311. 3469211. 3469211. 33221217444. 3423139. 3423139. 3322130365. 3425041. 332161311. 3469231. 3469231. 33221217474. 3423100. 3423100. 3423100. 3322130365. 3425043. 3425043. 332161335. 3469252. 3469253. 3469263. 3	3321150YWW pt				3423131		3322130226	3425031	3425031
3321161101							3322130231	3425035	3425035
3321161321 3469205 3469205 3469205 3322121YWV pt 3423100 3423100 3322130361 3425043 3425043 3321161331 3469231 3469231 3322121YWV pt 3423100 3499900 pt 3999900 pt 3322130365 3425045 3425045 3425049 3321161352 3469252 3469252 3469253 3469253 3469253 3469253 3469253 3469253 3469253 3469263 3425049 3425000 34250	3321161101	3469201	3469201	3322121431	3423137	3423137	3322130244	3425039	3425039
3321161331	3321161205	3469215 3469205							
3321161352 3469252 3469252 3469252 3469253 3322123 pt. 34234 34234 3322130777 3425049 3425000 3425000 3321161388 3469288 3469288 3469288 3322123 pt. 3523E pt. 3523E pt. 3523E pt. 33221307WW 3425002 3425002 3321161398 3469298 3469298 3322123 pt. 3523E pt. 346941 3469411 3469411 3469411 3469411 3469411 3469411 3469411 3469411 3469417 3469417 3469417 3469417 3469417 3469419 3469400 3321161571 3469271 3469271 33221237WV pt. 3423400 3423400 3322141291 3469400 332214161571 3469501 3469400 3469400 3469400 332212506 3423511 3423511 3423511 3322143231 3469515 3469501 3	3321161311	3469211	3469211	3322121YWV pt	3423100	3423100			
3321161354	3321161352	3469252	3469252			·	3322130377	3425049	3425049
3321161398 3469298 3469298 3469298 3322123 pt. 3523E pt. 3523E pt. 3321161398 3469298 346920 3322123 pt. 3523E pt. 3423414 3423414 3423414 3423414 3423414 3322141111 3469411 3469411 3469411 3322123106 3423433 3423433 3322141111 3469411 3469411 3469411 3322123106 3423433 3423444 3322141111 3469411 3469411 3469411 3469411 3322123111 3423444 3423444 332214121 3469414 3469417 332116525 346925 332212312 3423498 3423498 3322141231 3469417 3469417 332116151 3469261 3469261 3322123216 3523E80 3523E80 3523E00 pt 3322141241 3469429 3469429 332116151 346927 3469400 3322123114 3469400 3423400 3322141241 3469429 3469429 3321161584 3469284 3322123YWy pt 3523E00 pt 3523E00 pt 332214321 3469400 3469400 3321161584 3469200 3469200 3469200 3322125310 3423510 3423510 3322143211 3469507 3469507 3321163100 3469600 3469600 3322125101 3423511 3423511 3322143211 3469509 3469509 3321163100 3469600 3469600 3322125311 3423512 3423512 3322143211 3469505 3469505 3321165101 3469941 3322125316 3423522 342352 3322143211 3469555 pt 3469524 3321165211 3469948 3469948 3322125333 342351 342351 342351 3322143241 pt 3469555 pt 3469527 3321165221 3469951 3469951 3469950 3469509 3321165221 3469951 3469951 3469509 3469509 3321165221 3469951 3469959 3469959 3469959 3469950 3321165221 3469951 3469959 3469959 3469959 3469959 3469959 3469969 332212579W 342360 342360 3322143241 pt 3469950 3469000 pt	3321161354	3469253	3469253	3322123 pt	34234	34234	3322130YWW 3322130YWY		
3321161441 3469241 3469241 3469241 3423444 3423444 3423444 3322143211 3469414 3469414 3469417 3321161525 346925 3469225 3322123121 3423498 3423498 3322141231 3469417 3469417 3469417 3321161561 3469261 3469261 3322123216 3523E80 3523E00 pt 3322141241 3469429 3469429 3469429 3321161564 3469271 3469271 33221237WV pt 3523E00 pt 3322161054 3469260 3469200 34692	3321161398	3469298	3469298		3523E pt				
3321161441 3469241 3469241 3469241 3423444 3423444 3423444 3322143211 3469414 3469414 3469417 3321161525 346925 3469225 3322123121 3423498 3423498 3322141231 3469417 3469417 3469417 3321161561 3469261 3469261 3322123216 3523E80 3523E00 pt 3322141241 3469429 3469429 3469429 3321161564 3469271 3469271 33221237WV pt 3523E00 pt 3322161054 3469260 3469200 34692				3322123106	3423433	3423433	3322141111	3469411	3469411
3321161561 3469261 3469261 3322123216 3522E80 3523E00 pt 3322141241 3469429 3469429 3321161571 3469271 3469271 33221237WV pt 3423400 3423400 33221417WV 3469400 3469400 3321161584 3469284 3469200 3469200 3469200 3469200 3469600 346960 33221255101 3423511 3423511 3322143211 3469507 3469507 3321163.00 3469600 3469600 332212506 3423512 342351 342351 3322143211 3469509 3469509 3321165101 3469961 3469961 3322125311 3423512 342351 3322143211 3469509 3469501 3469515 3469515 3469515 3469515 3469511 3469511 3469515 3469515 3469515 3469511	3321161441 3321161525	3469241			3423444		3322141231	3469414 3469417	
3321161584 3469284 3469284 3469284 33221237WV pt. 3523E00 pt. 3523E00 pt. 33221433. 34695 34695 3321161YW 3469200 3469200 3322125. 34235 34235 3322143101 3469507 3469507 3321163. 346960 3469600 3322125101 3423511 3423511 3322143211 3469509 3469509 3321165. 34699 346990 346990 346991 3469521 342351 342351 3322143211 3469515 3469521 3321165. 3469941 3469941 3322125316 342352 342352 342352 3322143231 pt. 346952 pt. 3469524 3321165211 3469948 3469948 3469948 3469948 3469948 3469948 3469949 346950 346950 346950 346950 346950 346950 346950 346950 346950 346950 346950 346950 346950 346950 346900 pt.	3321161561	3469261	3469261	3322123216	3523E80	3523E00 pt	3322141241	3469429	3469429
3321163. 34696 34696 346960 346960 32125101 3423511 3423511 3322143211 3469509 3469509 3321163100 3469600 3469600 322125206 342351 342351 3322143221 3469515 3469515 322125311 3423521 3423512 3322143221 3469515 3469521 3321165. 34699 34699 3322125316 342352 342352 342352 3322143231 pt 3469525 pt 3469521 3321165101 3469941 3469941 3322125316 342352 342352 3322143231 pt 3469525 pt 3469524 3321165211 3469948 3469948 3322125321 342351 3423531 3423531 3322143241 pt 3469599 pt 3469527 3321165221 3469951 3469951 3469959 3322125333 3423541 3423500 332143241 pt 3469599 pt 3469598 3321165231 3469959 3469969 33221257 pt 342360 342360 342360 3322143241 pt 3469500 3469500 pt 3469509 pt 3469500 pt 3469000 pt 3469000 pt	3321161584	3469284	3469284	3322123YWV pt 3322123YWV pt	3423400				
3321163.1 34696 34696 34696 346960 346960 3322125101 3423511 3423511 3322143211 3469509 3469509 3321163100 3469600 3469600 3322125206 3423512 3423512 3322143221 342351 3469515 3469515 3469515 3322145210 3423512 3423521 3322143231 pt 3469525 pt 3469521 3321165101 3469941 3322125316 3423522 3423522 3322143231 pt 3469525 pt 3469524 3321165101 3469948 3469948 3322125312 3423531 3423531 3423531 3322143241 pt 3469599 pt 3469527 3321165211 3469948 3469948 3322125333 3423541 3423541 3322143241 pt 3469599 pt 3469598 3321165221 3469951 3469959 3469959 3469959 3469959 3469959 3469959 3469959 3469969 3469969 3469969 3469969 346900 pt 3469000 pt	3321161YWV	3469200	3469200	·	·	•	3322143101	34695	
3321165 34699 3469 34		34696		3322125101	3423511	3423511	3322143211	3469509	3469509
3321165 34699 34699 34699 34699 34699 346952 346959 346959 346959 346959 346959 346959 346950 346950 346950 346990 346990 346990 346990 346990 346900				3322125206	3423512		3322143231 pt	3469525 pt	
332116521 3469948 3469948 3469948 322125333 3423541 3423541 3322143241 pt 3469599 pt 3469598 321165221 3469959 3469959 3469959 321165231 3469961 3469961 3469961 3469961 3321165251 3469969 3469969 3469969 3469969 346900 pt 3469000 pt	3321165			3322125316	3423522	3423522	3322143231 pt	3469525 pt	3469524
3321165221 3469951 3469951 3469951 3469951 3469500 3469500 3469500 3469500 3321165231 3469501 3469961 3469961 3469969 3469969 3469969 3469969 346900 pt 346900 pt 3469000 pt	3321165211	3469948	3469948	3322125333	3423541	3423541	3322143241 pt	3469599 pt	3469598
3321165241 3469961 3469969 332127 pt 34236 34236 332214W 34690 pt 346900 pt 346900 pt 346900 pt 346900 pt 346900 pt	3321165231			3322125YWV			3322143YWV	3469500	
3321165271 3469985 3469985 3322127 pt 35241 pt 35241 pt 3469002 pt	3321165241	3469961	3469961	3322127 pt	34236	34236	332214W		
				3322127 pt	35241 pt	35241 pt	332214WYWY		

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
3323111 3323111106	34481 3448117	34481 3448117	3323213251 3323213306	3442298 3442221	3442298 3442221	3323233YWV pt 3323233YWV pt	3446200 3449600	3446200 3449600
3323111111	3448118 3448115 3448100	3448118 3448115 3448100	3323213YWV 3323215 pt	3442200	3442200 24991 pt	3323235 3323235101	34463 3446310	34463 3446310
3323113 3323113101	34482	34482 3448211	3323215 pt	34423	34423	3323235106 3323235211	3446312 3446320 3446322	3446312 3446320 3446322
3323113106 3323113111	3448214 3448215	3448214 3448215	3323215 pt 3323215101 pt 3323215101 pt	34497	34497 3442321 3449773	3323235216 3323235YWV 3323237	3446300	3446300 34464
3323113216 3323113221 3323113226	3448216 3448217 3448218	3448216 3448217 3448218	3323215106 pt 3323215106 pt	2499141	2499141 3442325	3323237101 3323237106	3446410 3446413	3446410 3446413
3323113231 3323113236	3448226 3448227	3448226 3448227	3323215106 pt 3323215111 pt 3323215111 pt	3449775 3442351 3449779	3449775 3442351 3449779	3323237111 3323237116 3323237YWV	3446416 3446418 3446400	3446416 3446418 3446400
3323113241 3323113YWV	3448254 3448200	3448254 3448200	3323215YWV pt 3323215YWV pt 3323215YWV pt	2499100 pt	2499100 pt 3442300 3449700	3323239 pt	34465	34465
332311W	34480	34480 3448000 3448002	3323217 3323217101	34424	34424 3442411	3323239 pt 3323239106 3323239111	3523E pt 3446512 3446530	3523E pt 3446512 3446530
3323121 pt	34411		3323217106 3323217111	3442412 3442413	3442412 3442413	3323239201 3323239311	3446510 3523E84	3446510 3523E00 pt
3323121 pt 3323121101 pt 3323121101 pt	34494	34494 3441141 3449443	3323217YWV	3442400	3442400 34425	3323239YWV pt 3323239YWV pt	3446500 3523E00 pt	3446500 3523E00 pt
3323121206 pt 3323121206 pt	3441142 3449447	3441142 3449447	3323219101 3323219106 3323219111	3442511 3442512 3442551	3442511 3442512 3442551	332323W pt	34460	34460 34490 pt
3323121211 pt 3323121211 pt 3323121216	3441143 3449452 3441144	3441143 3449452 3441144	3323219YWV	3442500	3442500 24990 pt	332323W pt 332323WYWW pt	35230 pt	35230 pt 3446000
3323121221 3323121226 3323121231	3441146 3441147 3441171	3441146 3441147 3441171	332321W pt	34420	34420	332323WYWW pt 332323WYWW pt 332323WYWY pt	3449000 pt	3449000 pt 3523000 pt 3446002
3323121YWV pt 3323121YWV pt	3441100 3449400	3441100 3449400	332321W pt 332321WYWW pt 332321WYWW pt	34490 pt 2499000 pt 3442000	34490 pt 2499000 pt 3442000	332323WYWY pt 332323WYWY pt	3449002 pt 3523002 pt	3449002 pt 3523002 pt
3323123 3323123100	34412 3441200	34412 3441200	332321WYWW pt 332321WYWY pt	3449000 pt	3449000 pt 2499002 pt	3324101 3324101101	34431 3443113	34431 3443113
3323125 3323125106	34413 3441320	34413 3441320	332321WYWY pt 332321WYWY pt	3442002 3449002 pt	3442002 3449002 pt	3324101206 3324101311 3324101YWV	3443118 3443155 3443100	3443118 3443155 3443100
3323125111 3323125116 3323125121	3441326	3441323 3441326 3441329	3323221 3323221101 3323221106	34441	34441 3444121 3444123	3324105 3324105101	34433 3443308	34433
3323125126 3323125131 3323125136	3441359	3441359 3441384 3441398	3323221211 3323221216 3323221YWV	3444127 3444129	3444127 3444129 3444100	3324105106 pt 3324105106 pt	3443331 pt	3443310
3323125136 3323125201 3323125YWV	3441316	3441316	3323223	34442	34442	3324105111 pt 3324105111 pt 3324105126 pt	3443332 pt	3443324 3443326
332312W pt		34410 34490 pt	3323223101 3323223106 3323223111	3444213 3444215 3444219	3444213 3444215 3444219	3324105126 pt 3324105131 pt 3324105131 pt	3443333 pt	3443330 3443328 3443334
332312W pt	34490 pt 3441000 3449000 pt	3441000 3449000 pt	3323223YWV	3444200	3444200 34444	3324105146 3324105151 pt	3443339	3443335 3443337
332312WYWY pt 332312WYWY pt	3441002 3449002 pt	3441002 3449002 pt	3323227101 3323227206 3323227211	3444411 3444417 3444423	3444411 3444417 3444423	3324105151 pt 3324105161 pt 3324105161 pt	3443342 pt	3443340 3443341 3443344
3323130 pt	34430 pt	34432 pt	3323227216 3323227221 3323227YWV	3444429 3444431 3444400	3444429 3444431 3444400	3324105171 pt 3324105171 pt	3443343 pt 3443345 pt 3443345 pt	3443346 3443347
3323130111 3323130116 3323130121	3443244 3443246 3443248	3443244 3443246 3443248	3323229 3323229106	34445	34445 3444516	3324105181 3324105186 3324105291	3443348 3443351 3443352	3443348 3443351 3443352
3323130226 3323130231 3323130236	3443252 3443254 3443256	3443252 3443254 3443256	3323229111 3323229116	3444517	3444517 3444518	3324105YWV 332410W 332410WYWW	3443300	3443300 34430 pt
3323130301 3323130346	3443221 3443299	3443221 3443298 pt	3323229121 3323229201 3323229YWV	3444519 3444505 3444500	3444519 3444505 3444500	332410WYWY	3443000 pt	3443000 pt 3443002 pt
3323130406 3323130YWW pt 3323130YWW pt			332322A 332322A101	34447 3444721	34447 3444721	3324207 3324207101 3324207106	34434 3443414 3443416	34434 3443414 3443416
3323130YWY	34421	3443002 pt 34421	332322A106 332322A111 332322A116	3444725	3444725 3444731 3444741	3324207YWV	3443400	3443400 34435
3323211110 3323211113 3323211116	3442111	3442116	332322AYWV 332322C	3444700 34448	3444700 34448	3324209101 3324209106	3443520 3443535	3443520 3443535 3443542
3323211119 3323211201	3442121 3442105	3442121 3442105	332322C101 332322C206 332322C311	3444811	3444811 3444813 3444819	3324209111 3324209YWV	3443542 3443500	3443500
3323211204 3323211207 3323211222	3442109 3442122	3442109	332322CYWV 332322E	3444819	3444800 34449	332420A 332420A100	34436 3443600	34436 3443600
3323211225 3323211328		3442123 3442124	332322E101 332322E106	3444931 3444941	3444931 3444941	332420C 332420C101 332420C106	34437 3443712 3443715	34437 3443712 3443715
3323211331 3323211334 3323211440	3442125 3442126 3442128	3442125 3442126 3442128	332322E211 332322E321 332322E326	3444953 3444955 3444962	3444953 3444955 3444962	332420C111 332420C116 332420C121	3443717 3443719 3443748	3443717 3443719 3443748
3323211443 3323211446	3442130 3442131	3442130 3442131	332322E331 332322E336 332322EYWV	3444965 3444998 3444900	3444965 3444998 3444900	332420C126 332420CYWV	3443750 3443700	3443750 3443700
3323211549 3323211552 3323211555	3442132 3442134 3442136	3442132 3442134 3442136	332322W	34440 pt	34440 pt 3444000 pt	332420E 332420E101	34438 3443803	34438 3443803
3323211661 3323211664	3442142 3442143	3442142 3442143	332322WYWY 3323231	3444002 pt	3444002 pt 34461	332420E106 332420E211 332420E216	3443805 3443808 3443813	3443805 3443808 3443813
3323211667 3323211758 3323211770	3442144 3442139 3442145	3442144 3442139 3442145	3323231106 3323231111	3446112	3446112 3446115	332420E221 332420E226 332420EYWV	3443820 3443822 3443800	3443820 3443822 3443800
3323211770 3323211837 3323211YWV	3442127 3442100	3442127 3442100	3323231116 3323231201 3323231YWV	3446110 3446100	3446117 3446110 3446100	332420G	34439	34439
3323213 3323213101	34422	34422 3442220	3323233 pt	34462	34462	332420G101	3443915 3443917 3443919	3443917 3443919
3323213111 3323213116 3323213121	3442224		3323233 pt 3323233101 pt 3323233101 pt		34496 3446210 3449611	332420G116 332420G121 332420G126	3443923 3443931 3443932	3443923 3443931 3443932
3323213226 3323213231 3323213236	3442235 3442241	3442235 3442241	3323233106 pt 3323233106 pt 3323233211	3446212	3446212 3449632 3446220	332420G131	3443933 3443934 3443936	3443933 3443934 3443936
3323213241	3442242 3442243 3442249	3442243	3323233216	3446220 3446222 3446226	3446222	332420G141	3443951	3443951

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
332420G356			3325105 3325105100	34296	34296 3429600	332618BYWV		
332420W	34430 pt	34430 pt	3325107	34297 3429711	34297	332618W pt	33150 pt	•
332420WYWW 332420WYWY	•	3443002 pt	3325107101 3325107106 3325107111	3429731		332618W pt	34960	34960
3324311 3324311101	34111		3325107YWV	3429700	3429700	332618WYWW pt 332618WYWW pt 332618WYWW pt	3315000 pt	3399000 pt
3324311206 3324311YWV	3411191 3411100	3411191 3411100	3325109 3325109101 3325109106	34298 pt 3429812 3429822	3429812	332618WYWY pt 332618WYWY pt	3315002 pt 3399002 pt	3315002 pt
3324313 3324313100	34112 3411200		3325109100 3325109111	3429852	3429852	332618WYWY pt	3496002	3496002
332431W	34110 3411000	34110 3411000	3325109199	3429898	3429898	3327100 pt	35990 pt	35995
332431WYWY	3411002	3411002	332510W pt	•	34290 pt	3327100000 3327100YWW	3599500	3599000 pt
3324391 pt	34121		332510W pt 332510WYWW pt	34990 pt 3429000 pt	34990 pt 3429000 pt	3327100YWY	3599002 pt	·
3324391100 3324391306	3412100 pt	3412100 pt 3499821	332510WYWW pt 332510WYWY pt 332510WYWY pt	3499000 pt	3499000 pt 3429002 pt 3499002 pt	3327211100		
3324391311 3324391YWV pt 3324391YWV pt	3499825 3412100 pt	3412100 pt	3326111	34931	34931	3327215 3327215111 3327215222	34512	3451231
3324393	34122	34122	3326111101 3326111106	3493106	3493106	3327215333 3327215444	3451252 3451257	3451252
3324393100	3412200		3326111216 3326111221 3326111311	3493157	3493157	3327215555	3451262	3451262 3451239
·	34293		3326111326 3326111YWV	3493199	3493199	3327215699 3327215YWV	3451298 3451200	3451299 pt 3451200
3324395 pt 3324395101 pt		34443 3412313	3326113 3326113101	34932	34932 3493210	332721W 332721WYWW	34510 3451000	34510 3451000
3324395101 pt 3324395106 pt	3444314 3429300	3444314 3429300	3326113106 3326113YWV	3493220	3493220	332721WYWY	3451002	3451002
3324395106 pt 3324395199 3324395YWV pt		3412319	332611W	34930	34930 3493000	3327221 3327221101 3327221106	34527 3452701 3452706	3452701
3324395YWV pt	3444300	3444300	332611WYWY	3493002	3493002	3327221115 3327221145	3452715 3452745	3452715
3324397 3324397100	35373 pt 3537334	35373 pt 3537300 pt	3326122	34952	34952 3495215	3327221159 3327221172	3452759	3452759 3452761
•	34120		3326122116 3326122201 3326122206	3495217 3495212 3495214	3495217 3495212 3495214	3327221178 3327221184 3327221YWV	3452762	3452763
332439W pt	·	34290 pt 34440 pt	3326122YWV	3495200	3495200	3327223	34524	
332439W pt	34990 pt	34990 pt	3326124 3326124111 3326124201	34953 pt 3495317 3495311	34953 pt 3495317 3495311	3327223111	3452411 3452412	3452411 3452412
332439W pt 332439WYWW pt	35370 pt 3412000	35370 pt 3412000	3326124216 3326124221 pt	3495318	3495318 3495313	3327223133 3327223144 3327223155	3452419 3452439 3452445	3452439
332439WYWW pt 332439WYWW pt	3429000 pt	3429000 pt 3444000 pt	3326124221 pt 3326124226	3495320 pt	3495319 3495321	3327223199 3327223YWV	3452489 3452400	3452489
332439WYWW pt 332439WYWW pt	3499000 pt	3537000 pt	3326124231	3495399 3495300 pt	3495398 pt 3495300 pt	3327225	34525	34525
332439WYWY pt 332439WYWY pt 332439WYWY pt	3412002	3412002 3429002 pt 3444002 pt	332612W	34950 pt 3495000 pt	34950 pt 3495000 pt	3327225104 3327225129 3327225189	3452504 3452529 3452589	3452504 3452529 3452589
332439WYWY pt 332439WYWY pt	3499002 pt	3499002 pt	332612WYWY	3495002 pt	3495002 pt 34961	3327225YWV	3452500	3452500
3325101 3325101101	34292	34292 3429212	3326181101 3326181103	3496113	3496115	3327227 3327227109 3327227115	34526 3452609 3452615	3452609
3325101106 3325101111	3429213	3429213 3429214	3326181105 3326181107 3326181YWV	3496152	3496134 3496152 3496100	3327227113 3327227135 3327227179	3452635 3452679	3452635
3325101116 3325101121	3429253	3429253	3326182	33992	33992	3327227YWV	3452600	3452600
3325101133 3325101YWV	3429255 3429200	3429255 3429200	3326182101 3326182106 3326182YWV	3399298	3399211 3399298 3399200	3327229 3327229105 3327229115	34528	34528 3452831 3452811
3325103 pt		34294	3326183	3399200 34964	34964	3327229135 3327229199	3452821 3452898	
3325103 pt 3325103101 3325103111 pt	3429412 3429415 pt	34991 3429412 3429413	3326183100	3496400 34965	3496400 34965	3327229YWV	3452800	3452800
3325103111 pt 3325103121	3429415 pt 3429417	3429414 3429417	3326185100	3496500	3496500	332722W	34520 3452000 3452002	34520 3452000 3452002
3325103125 3325103126	3499117 3429418	3499117 3429418	3326187 3326187101 3326187103	34966	34966 3496613 3496621	3328110	33980	33980
3325103128 3325103129 3325103131	3499143 3499141 3429419	3499198 pt 3499141 3429419	3326187103 3326187105 3326187107	3496635 3496671	3496635 3496671	3328110100 3328110YWW 3328110YWY	3398000 pt 3398000 pt 3398002	3398000 pt
3325103133	3429422	3429422	3326187YWV	3496600	3496600	3328120	34790 pt	34790 pt
3325103137 3325103216	3499199 3429416	3499198 pt 3429416 3429423	3326189 3326189101 3326189103	33152 pt 3315202 3315204	33152 pt 3315201 pt 3315203 pt	3328120101 3328120106	3479010	3479011
3325103336 3325103341 3325103346	3429423 3429424 3429427	3429423 3429424 3429427	3326189103 3326189105 3326189107	3315206 3315208	3315205 pt 3315207 pt	3328120111 3328120116 3328120141	3479013	3479013 3479021 pt 3479081
3325103361 3325103363	3429437 3429442	3429437 3429442	3326189109 3326189111 pt	3315211 3315212 pt	3315209 pt 3315210 pt	3328120146 3328120221	3479077 3479031	3479077 3479031
3325103365 3325103367	3429443 3429444	3429443 3429444	3326189111 pt 3326189113 3326189115	3315212 pt	3315213 pt 3315216 pt	3328120326 3328120431	3479061 3479073	3479061 3479073
3325103451 3325103456	3429433 3429436	3429433 3429436	3326189115 3326189117 3326189119	3315224 3315226	3315222 pt 3315223 pt 3315225 pt	3328120536 3328120YWW 3328120YWY	3479075	3479000 pt
3325103569 3325103571	3429452 3429453	3429452 3429453	3326189121 3326189YWV	3315231 3315200 pt	3315230 pt 3315200 pt	3328130	34710	34710
3325103573 3325103575	3429454 3429461	3429454 3429461 3429462	332618B 332618B105	34968 3496855	34968 3496855	3328130100 3328130YWW 3328130YWY	3471000 pt	3471000 pt
3325103579 3325103581 3325103583	3429462 3429464 3429466	3429462 3429464 3429466	332618B217 332618B319	3496883 3496885	3496883 3496885	3328130YWY	3471002	
3325103685 3325103687	3429471 3429473	3429471 3429473	332618B401 332618B403	3496842 3496851	3496842 3496851	3329111101 3329111103	3491111	3491111 3491121
3325103689 3325103691	3429481 3429491	3429481 3429491	332618B407 332618B409	3496863 3496871	3496863 3496871 3496873	3329111105 3329111107 3329111109	3491123 3491134	3491134
3325103699 3325103YWV pt	3429498 3429400	3429498	332618B411 332618B413 332618B415	3496873 3496875 3496881	3496873 3496875 3496881	3329111111	3491138	3491143
3325103YWV pt	3499100	3499100	332618B421	3496898	3496898	3329111YWV	3491100	3491100

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
3329113 3329113101	34912 3491201	34912 3491201	332912L 332912L100	3492M	3492M 3492M00	332919W pt	34940 pt	34940 pt
3329113103 3329113105	3491211	3491211 3491221	332912N	3492N	3492N	332919W pt	34990 pt	34990 pt 3429000 pt
3329113107 3329113109	3491223	3491223 3491231	332912N100	3492N00	3492N00	332919WYWW pt 332919WYWW pt	3494000 pt 3499000 pt	3494000 pt 3499000 pt
3329113111 3329113113	3491235 3491241	3491235 3491241	332912W pt	34920	34920 37280 pt	332919WYWY pt 332919WYWY pt	3429002 pt 3494002 pt	3429002 pt 3494002 pt
3329113215 3329113YWV	3491243	3491243	332912WYWW pt 332912WYWW pt	3492000	3492000	332919WYWY pt	3499002 pt	3499002 pt 35621
3329115	34913	34913	332912WYWY pt 332912WYWY pt	3492002	3492002	3329911 3329911000	35621 3562100	3562100
3329115101 3329115103	3491311	3491311 3491323	3329131	34321	34321	3329913 3329913000	35622 3562200	35622 3562200
3329115105 3329115107	3491335 3491347	3491335 3491347	3329131101 3329131206	3432102	3432102 3432105 3432108	3329915 3329915000	35623	35623
3329115109 3329115211 3329115YWV	3491359 3491361 3491300	3491359 3491361 3491300	3329131211 3329131316 3329131321	3432108 3432110 3432112	3432110 3432112	3329917	3562300	3562300 35624
3329117	34914	34914	3329131326 pt 3329131326 pt	3432111 pt 3432111 pt	3432112 3432113 3432114	3329917000	3562400	3562400
3329117101 3329117103	3491411 3491413	3491411 3491413	3329131431 3329131436	3432115	3432115 3432117	3329919 3329919000	35629 3562900	35629 3562900
3329117105 3329117107	3491415 3491417	3491415 3491417	3329131441	3432118	3432118	332991W	35620 3562000	35620 3562000
3329117109 3329117111	3491421 3491423	3491421 3491423	3329131446	3432120 3432122	3432120 3432122	332991WYWY	3562002	3562002
3329117113 3329117115	3491425 3491431	3491425 3491431	3329131456 3329131461	3432125	3432125 3432128	3329920	34820	34820 3482025
3329117217 3329117YWV	3491461 3491400	3491461 3491400	3329131466	3432130 3432133 pt	3432130 3432132 3432134	3329920206 3329920311 3329920416	3482035 3482045 3482055	3482035 3482045 3482055
3329119 3329119101	34915 3491511	34915 3491511	3329131468 pt 3329131YWV	3432133 pt	3432136 3432100	3329920521 3329920626	3482061 3482069	3482061 3482069
3329119103 3329119105	3491523 3491535	3491523 3491535	3329133	34322	34322	3329920731 3329920YWW	3482098 3482000	3482098 3482000
3329119107 3329119209	3491561	3491547 3491561	3329133131 3329133136	3432227	3432224 3432227	3329920YWY	3482002	3482002
3329119YWV 332911B	3491500 34916	3491500 34916	3329133141 3329133146	3432233	3432230 3432233	3329931 3329931101	34831	
332911B101 332911B103	3491611 3491623	3491611 3491623	3329133151 3329133201 pt	3432202 pt	3432236 3432201	3329931106 3329931111	3483135	3483135 3483151
332911B105 332911B107	3491631 3491633	3491631 3491633	3329133201 pt 3329133206 pt	3432202 pt	3432203 3432205	3329931116 3329931121	3483171 3483181	3483171 3483181
332911B109 332911B111	3491641 3491653	3491641 3491653	3329133206 pt 3329133211	3432206 pt	3432207 3432212	3329931YWV 3329933	3483100 34833	3483100 34833
332911B113 332911B115	3491665 3491678	3491665 3491678	3329133216 3329133221	3432215 3432218	3432215 3432218	3329933101	3483311	3483311 3483331
332911B117 332911BYWV	3491698 3491600	3491698 3491600	3329133226 3329133256	3432221 3432239	3432221 3432239	3329933YWV	3483300	3483300
332911D	34917	34917 3491711	3329133261 3329133266	3432245 3432250	3432245 3432250	332993W	3483000	34830 3483000
332911D101	3491711 3491713 3491715	3491713 3491715	3329133YWV	3432200	3432200 34323 pt	3329941	3483002	3483002 34841
332911D107 332911D109	3491727 3491731	3491727 3491731	3329137101 3329137106	3432302 3432305	3432302 3432305	3329941100	3484100	
332911D111	3491739 3491798	3491739 3491798	3329137111 3329137116 pt	3432311	3432311 3432314	3329943 3329943101 3329943206	34842	34842 3484211 3484213
332911DYWV	3491700	3491700	3329137116 pt 3329137121 pt	3432315 pt	3432317 3432320	3329943311 3329943416	3484216 3484221	3484216 3484221
332911F 332911F100	34918	34918 3491800	3329137121 pt 3329137131	3432321 pt	3432323 3432327	3329943421 3329943426	3484223 3484226	3484223 3484226
332911H 332911H100	34919 3491900	34919 3491900	3329137141 pt	3432331 pt	3432308 3432332 pt	3329943431 3329943536	3484254 3484265	3484254 3484265
332911W	34910	34910	3329137224	3432324	3432325 pt 3432325 pt	3329943541 3329943546	3484274 3484281	3484274 3484281
332911WYWY	3491000 3491002	3491000 3491002	3329137YWV	3432300 pt	3432300 pt 34320 pt	3329943YWV 332994W	3484200 34840	3484200 34840
·	3492A		332913WYWW	3432000 pt	3432000 pt	332994WYWW 332994WYWY	34840	3484000 3484002
3329121 pt 3329121100 pt	37284 pt	37284 pt 3492A00	3329191 pt		34944	3329951	34891	34891
3329121100 pt 3329121100 pt		3728400 pt 3728473 pt 3728475 pt	3329191 pt 3329191101 pt	34998 pt	34998 pt	3329951106 3329951111	3489121 3489151	3489121 3489151
3329121100 pt 3329123 pt	3728401 pt	3492B	3329191101 pt 3329191203	3494421 3499831 3494431	3494421 3499831 3494431	3329951116 3329951YWV	3489171 3489100	3489171 3489100
3329123 pt	37284 pt	37284 pt	3329191205 3329191207	3494441 3494451	3494441 3494451	3329952	34892	34892
3329123100 pt 3329123100 pt 3329123100 pt	3728400 pt	3728400 pt	3329191209 3329191YWV pt	3494499 3494400	3494499 3494400	3329952100 332995W	3489200 34890	3489200 34890
3329123100 pt	3728402 pt	3728485 pt	3329191YWV pt	3499800 pt	3499800 pt	332995WYWW	3489000 3489002	3489000 3489002
3329125 3329125100		3492C 3492C00	3329193 pt	•	34298 pt	3329961	33534	33534
3329127 3329127100	3492D	3492D 3492D00	3329193 pt 3329193101 3329193103	34945 pt 3494511 3494512	34945 pt 3494511 3494512	3329961100		
3329129	3492E	3492E	3329193105 3329193107	3494513 3494514	3494513 3494514	3329963	34980	34980 3498013
3329129100	3492E00	3492E00	3329193109 3329193111	3494515 3494516	3494515 3494516	3329963203 3329963205 3329963207	3498015 3498017 3498019	3498015 3498017 3498019
332912B 332912B100	3492F00		3329193113 3329193215	3494517	3494517 3494518	3329963YWV	3498000 pt	3498000 pt
332912D 332912D100	3492G	3492G 3492G00	3329193217 3329193319	3494519 3494521	3494519 3494521	332996W	33530 pt 3353000 pt	33530 pt 3353000 pt
332912F pt		3492H	3329193321	3494523	3494523	332996WYWW pt 332996WYWY pt	3498000 pt	3498000 pt 3353002 pt
332912F pt 332912F100 pt	37284 pt 3492H00	37284 pt 3492H00	3329193323 3329193325	3494532 3494534	3494532 3494534	332996WYWY pt	3498002	3498002
332912F100 pt 332912F100 pt	3728400 pt	3728400 pt 3728473 pt	3329193327 3329193329 3329193331	3494537 3494542 3494544	3494537 3494542 3494544	3329970 3329970101 3329970206	35430 3543011 3543098	35430 3543011 3543098
332912F100 pt 332912F100 pt	3728403 pt	3728475 pt 3728483 pt	3329193331 3329193333 3329193335	3494547 3494585	3494544 3494547 3494585	3329970206	3543000 3543002	3543098 3543000 3543002
332912F100 pt 332912H		3728485 pt 3492J	3329193336 3329193337	3429862 3494599	3429862 3494599	3329980	34310	34310
332912H100	3492J00	3492J00	3329193YWV pt		3429800 pt 3494500 pt	3329980110	3431010	3431010 3431098
332912J	3492K		· ·	34290 pt	•	3329980YWW 3329980YWY	3431000 3431002	3431000 3431002

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
3329991		34971	332999AYWV	3499500	3499500	332999GYWV pt	3999900 pt	3999900 pt
3329991101 3329991106		3497132 3497133	332999G pt	32918 pt	32918 pt	332999W pt	32910 pt	32910 pt
3329991111			332999G pt	34323 pt	34323 pt	332999W pt	34320 pt	34320 pt
3329993			332999G pt	34945 pt	34945 pt	332999W pt	34940 pt	34940 pt
3329993101 3329993106	3497352	3497352 3497354	332999G pt	34998 pt	34998 pt	332999W pt	34970 pt	34970 pt
3329993111	3497358	3497358	332999G pt	35373 pt	35373 pt	332999W pt	34990 pt	34990 pt
3329993YWV			332999G pt			332999W pt	35370 pt	35370 pt
3329994 3329994101	3599411	3599411	332999G101	3499811		332999W pt	35990 pt	35990 pt
	3599413 3599415	3599413 3599415	332999G189	3494571 3499829	3494571 3499829	332999W pt	39990 pt	39990 pt 3291000 pt
3329994116	3599416		332999G303	3499839	3499839	332999WYWW pt	3432000 pt	3432000 pt
	3599425 3599400 pt		332999G305	3537331	3537331 3999913 pt	332999WYWW pt 332999WYWW pt	3494000 pt	3494000 pt 3497000 pt
3329997			332999G306 pt	3999991 pt	3999942 pt 3999944 pt	332999WYWW pt 332999WYWW pt		3499000 pt 3537000 pt
3329997101 3329997106			332999G306 pt	3999991 pt	3999999 pt	332999WYWW pt 332999WYWW pt	3599000 pt	3599000 pt
3329997YWV		3499200	332999G313	3291831		332999WYWY pt	3999000 pt 3291002 pt	3999000 pt 3291002 pt
3329999		34993 3499300	332999G316	3291835 3432329		332999WYWY pt	3432002 pt	3432002 pt
332999A		34995	332999G399 pt	3499898		332999WYWY pt	3494002 pt 3497002 pt	3494002 pt 3497002 pt
332999A101 332999A106	3499511	3499511 3499521	332999GYWV pt 332999GYWV pt	3432300 pt	3432300 pt	332999WYWY pt 332999WYWY pt	3499002 pt	3499002 pt 3537002 pt
332999A111	3499531	3499531	332999GYWV pt	3499800 pt	3499800 pt	332999WYWY pt	3599002 pt	3599002 pt
332999A116	3499539	3499539	332999GYWV pt	3537300 pt	3537300 pt	332999WYWY pt	3999002 pt	3999002 pt