

AN ANALYSIS OF FATAL EVENTS IN THE CONSTRUCTION INDUSTRY 2001

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This report is based upon OSHA-inspected fatal events in construction during calendar 2001. The data analyzed were provided by Dr. Joseph Dubois, Director, Office of Statistics, Occupational Safety and Health Administration. William R. Schriver, Ph.D., Director and Thomas E. Cressler II, M.S., Senior Associate Administrator, conducted the study and prepared this report; they alone are responsible for all interpretations, conclusions and any errors found in the report.

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I. Introduction

This paper reports on the causes of fatal events in the construction industry which occurred in calendar year 2001. Seven earlier studies¹ by the Construction Industry Research and Policy Center (CIRPC) analyzed the causes of fatal events in this industry in 1991-1992, 1993-1994, 1995, 1996, 1997, 1998, 1999 and 2000.

II. Data

The data analyzed in this report, provided by OSHA from Form 170's, consist of narrative descriptions of the 719 fatal events inspected by OSHA resulting from accidents which occurred in construction during calendar year 2001. The Occupational Safety and Health Act of 1970 provides States with the option of administering the Act themselves or accepting Federal administration of the Act. Twenty-nine States and the District of Columbia chose administration under the Federal System, and the remaining 21 States and two Territories chose self-administration under State Plans².

In this report as in earlier reports, analysis includes all OSHA-inspected fatal construction accidents regardless of Federal or State administration.

Also, as in the earlier studies, non-accidental fatalities on construction sites or contractor yards (such as deaths from non-work related heart attacks, strokes, seizures, etc.) and fatalities of construction workers killed off-site in traffic accidents were excluded from the analysis; these fatalities accounted for about 3 percent of OSHA-inspected fatal construction events in 1991-

¹ An Analysis of Fatal Events in the Construction Industry, 1991-1992 (1993), An Analysis of Fatal Events in the Construction Industry, 1993-1994 (1995), An Analysis of Fatal Events in the Construction Industry, 1995 (1996), An Analysis of Fatal Events in the Construction Industry, 1996 (1997), An Analysis of Fatal Events in the Construction Industry, 1997 (1999), An Analysis of Fatal Events in the Construction Industry, 1998 (2000), An Analysis of Fatal Events in Construction, 1999 (2001), and An Analysis of Fatal Events in the Construction Industry, 2000 (2002), Construction Industry Research and Policy Center, University of Tennessee, Knoxville.

² States in the Federal System are: AL, AR, CO, CT, DE, DC, FL, GA, ID, IL, KS, LA, ME, MA, MS, MO, MT, NE, NH, NJ, NY, ND, OH, OK, PA, RI, SD, TX, WV and WI. States and Territories under State Plans are: AK, AZ, CA, HI, IN, IA, KY, MD, MI, MN, NV, NM, NC, OR, PR, SC, TN, UT, VT, VI, VA, WA and WY.

2000 and 3 percent in 2001. Although the Occupational Safety and Health Act of 1970 requires employers to report fatalities to OSHA within eight hours of the occurrence of the event, all fatalities on construction sites are not inspected by OSHA; for example, OSHA does not inspect fatal construction events involving independent contractors with no employees. Therefore, the results reported upon here do not provide a year-to-year analysis of changes in the absolute number of fatal events or individuals killed on construction sites.

Each narrative record typically consists of a brief description of the event leading to the fatality, although this is not always the case. Where the narrative description was omitted, inconclusive or completely unclear the event cause was coded “unknown cause or other”; otherwise each narrative was analyzed and classified into one of 31 cause categories, although a great deal of collective judgment was often required to classify the cause of many of the accidents.

This report also includes the following classification of each fatal event according to coding by the OSHA compliance officer who investigated the accident: (1) type of construction (new or addition, alteration or rehabilitation, maintenance or repair, demolition, other); (2) estimate of total project value (seven dollar-value categories beginning with “under \$50,000” and ending with “\$20,000,000 and over”); (3) 17 end-use categories, such as “single-family housing,” “multi-family building,” “commercial building,” “street or highway,” etc.; and (4) the construction operation being performed that caused the fatal event (selected from a list of construction operations such as “backfilling and compacting,” “cutting concrete pavement,” “erecting structural steel,” “installing equipment (HVAC and other,” etc.). However, CIRPC’s review of over 1200 case files of fatal construction events occurring in 1997, 1998 and 1999 revealed that coded data for an event were sometimes internally inconsistent or did not comport

with corresponding narrative descriptions. Consequently, the data analyzed in this report are restricted to the direct causes of the fatal events where the authors were able, in most cases, to classify the events with relative certainty according to 31 types of causes, essentially the same types as were used in CIRPC's previous fatality studies. However, coded data are included in Appendix C for the following: (1) end-use of structure; (2) type of construction; (3) occupation of the victim(s); (4) contract value of the construction project; and (5) construction operation associated with the fatality.

In classifying the events a rule of primacy was followed for multiple-cause fatalities (representing less than 1 percent of the fatality events in this study and the earlier studies cited): the first cause in the chain of causes was recorded as the cause of the fatal event. Definitions of the causes are shown in Appendix A.

III. Analysis

A. Distribution of Fatal Events by Cause

Table 1 shows the cause classification system, the number of times each cause represented a fatal event in 2001, the relative frequency of each cause and the number of victims killed.³ It can be seen that "fall from/through roof" led all other causes in number of fatal events (86 or 12.0 percent of total fatal events), followed by "fall from/through structure" (77 or 10.7 percent). The third leading cause was "crushed/run-over of non-operator by operating construction equipment" (55 or 7.6 percent); the fourth leading cause was "electric shock from equipment installation/tool use" (48 or 6.7 percent); the fifth leading cause was "struck by falling object/projectile (including tip-overs)" (40 or 5.6 percent); and the sixth leading cause was "fall from/with ladder" (38 or 5.3 percent). The number and relative frequencies of the remaining

³ Each event included at least one person killed and in several events additional workers were killed or injured.

Table 1. Construction Fatality Event Causes, 2001

Event Causes	Description	Number of Events and Victims		Percent of Events
		Events	Victims	
1.	asphyxiation/inhalation of toxic vapor	11	13	1.5
2.	caught in stationary equipment	4	5	0.6
3.	crushed from collapse of structure	19	19	2.6
4.	crushed/run-over of non-operator by operating construction equipment	55	56	7.6
5.	crushed/run-over/trapped of operator by operating construction equipment	30	30	4.2
6.	crushed/run-over by construction equipment during maintenance/modification	10	10	1.4
7.	crushed/run-over by highway vehicle	20	24	2.8
8.	drown, non-lethal fall	3	3	0.4
9.	electric shock by touching exposed wire	28	28	3.9
10.	electric shock by equipment contacting power source	36	38	5.0
		<u>Event</u>	<u>Percent</u>	
a.	ladder	2	0.3	
b.	scaffold	1	0.1	
c.	crane/lifting equipment/boom/dump truck	26	3.6	
d.	contact while handling materials such as gutters, iron rods, etc.	7	1.0	
11.	electric shock from equipment installation/tool use	48	48	6.7
12.	electric shock, other	0	0	0.0
13.	elevator (struck/crushed by elevator or counter weights)	6	6	0.8
14.	fall from/with ladder: includes collapse/fall of ladder	38	38	5.3
15.	fall from/through roof	86	87	12.0
16.	fall from highway vehicle/construction equipment	4	4	0.6
17.	fall from/with scaffold	23	23	3.2
18.	fall from/with bucket (aerial lift/basket)	18	19	2.5
19.	fall from/with structure (other than roof)	77	77	10.7
20.	fall from/with platform or catwalk	13	17	1.8
21.	fall through opening (other than roof)	24	24	3.3
22.	fall, other	8	8	1.1
23.	fire/explosion/scalding	12	12	1.7
24.	hyperthermia/hypothermia	5	5	0.7
25.	hit, crushed, fall during lifting operations	31	32	4.3
26.	struck by falling object/projectile (including tip-overs)	40	40	5.6
27.	crushed/suffocation from trench collapse	32	33	4.5
28.	crushed while unloading-loading equipment/material (except by crane)	14	14	1.9
29.	shock/burn from lightning	4	4	0.6
30.	crushed other	1	1	0.1
31.	unknown cause or other	19	19	2.6
		719	737	100.00

causes of the 719 fatal events analyzed may be read directly from Table 1. (Comparative frequencies for earlier years are shown in Figures B1 through B4 in Appendix B.)

The number of victims killed by each cause is also shown in Table 1 where it can be seen that in most events only one worker was killed per event. (In one cause category no workers were killed, “electric shock, other”.) There were 20 fatality causes where no event had multiple fatalities; only 10 fatality causes included events with multiple fatalities. “Fall from/with platform or catwalk” was the fatality cause which had the most victims killed per event, i.e., 13 events and 17 victims or 1.3 victims per event.

Table 2 shows a comparison of the ranks of the causes in 2001 with the average rank of the causes of fatal events during the period 1991 - 2000. It can be seen that the overall rank pattern of the causes in 2001 is very similar to the rank pattern in 1991 – 2000. An overall statistical comparison of the correlation of the rank in 2001 with the average rank in 1991-2000 was calculated using a Spearman rank correlation procedure.⁴ The correlation obtained was + .88, $p < .001$, indicating that the ranks of the causes in the two time periods are highly and positively correlated, i.e., did not change significantly between 1991 – 2000 and 2001⁵. Since averaging the 1991 – 2000 ranks removed inter-year variance, a somewhat lower correlation would be expected between 2000 and 2001 ranks of causes, i.e., a measure of the short-term cycle as opposed to a longer-term trend. The Spearman rank-order correlation between 2000 and 2001 causes was calculated and found to be insignificantly higher, $r = .90$, $p < .001$, indicating that the 1991-1998 pattern changed very little between 2000 and 2001.

⁴ Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences (New York: McGraw-Hill Book Co., Inc., 1956), p. 219.

⁵ Seventeen of the 719 fatal events had either no narrative or a narrative too incomplete to classify the cause of fatality. These records were coded as “unknown” cause; this was not done in prior years. They were omitted from the calculation of the Spearman Rank correlation in order to avoid data distortion.

Table 2. Comparison of Ranks of Causes of Fatal Events in 1991 - 2000 with 2001

<u>Event</u>	<u>1991 - 2000 Average</u>			<u>2001</u>		
	<u>Number</u>	<u>Percent</u>	<u>Rank</u>	<u>Number</u>	<u>Percent</u>	<u>Rank</u>
1. asphyxiation/inhalation of toxic vapor	6.2	1.0	22	11	1.6	20
2. caught in stationary equipment	5.9	1.0	23	4	0.6	26
3. crushed from collapse of structure	26.3	4.3	8	19	2.7	15
4. crushed/run-over of non-operator by operating construction equipment	46.4	7.7	4	55	7.8	3
5. crushed/run-over/trapped of operator by operating construction equipment	32.6	5.4	6	30	4.3	10
6. crushed/run-over by construction equipment during maintenance/modification	12.4	2.0	19	10	1.4	21
7. crushed/run-over by highway vehicle	24.6	4.1	11	20	2.8	14
8. drown, non-lethal fall	5.9	1.0	23	3	0.4	28
9. electric shock by touching exposed wire	25.1	4.1	10	28	4.0	11
10. electric shock by equipment contacting power source	47.3	7.8	2	36	5.1	7
11. electric shock from equipment installation/tool use	26.0	4.3	9	48	6.8	4
12. electric shock, other	5.3	0.9	26	0	0.0	29
13. elevator (struck/crushed by elevator or counter weights)	2.4	0.4	29	6	0.9	24
14. fall from/with ladder: includes collapse/fall of ladder	23.4	3.9	12	38	5.4	6
15. fall from/through roof	68.0	11.2	1	86	12.3	1
16. fall from highway vehicle/construction equipment	5.4	0.9	25	4	0.6	26
17. fall from/with scaffold	20.3	3.3	14	23	3.3	13
18. fall from/with bucket (aerial lift/basket)	11.9	2.0	20	18	2.6	16
19. fall from/with structure (other than roof)	47.1	7.8	3	77	11.0	2
20. fall from/with platform or catwalk	15.1	2.5	17	13	1.9	18
21. fall through opening (other than roof)	15.4	2.5	16	24	3.4	12

Table 2. continued

<u>Event</u>	<u>1991 - 2000 Average</u>			<u>2001</u>		
	<u>Number</u>	<u>Percent</u>	<u>Rank</u>	<u>Number</u>	<u>Percent</u>	<u>Rank</u>
22. fall, other	4.2	0.7	27	8	1.1	22
23. fire/explosion/scalding	14.3	2.4	18	12	1.7	19
24. hyperthermia/hypothermia	3.5	0.6	28	5	0.7	25
25. hit, crushed, fall during lifting operations	33.1	5.5	5	31	4.4	9
26. struck by falling object/projectile (including tip-overs)	22.5	3.7	13	40	5.7	5
27. crushed/suffocation from trench collapse	28.7	4.7	7	32	4.6	8
28. crushed while unloading-loading equipment/material (except by crane)	10.9	1.8	21	14	2.0	7
29. shock/burn from lightning	16	2.6	15	7	1.0	23
TOTAL	<u>606.2</u>	<u>100.0</u>		<u>702</u>	<u>100.0</u>	

The correlation result is not surprising given that the general composition of construction output, and therefore the mix of construction operations required to produce the output, was probably very similar during the time periods examined. This interpretation implies that the rank of a cause is a function of the magnitude of exposure to the cause and/or the inherent danger associated with the cause.

While the number of OSHA-inspected fatal construction events caused by accidents have had an upward trend since 1991, employment in construction establishments has also increased.⁶ The trend of these fatal events per 100,000 construction establishment employees is as follows: 1991 – 1992: 13.1; 1993 – 1994: 11.8; 1995: 11.4; 1996: 10.5; 1997: 10.6, 1998: 10.4; 1999: 11.0; 2000: 9.5; and 2001: 10.8.

⁶ Bureau of Labor Statistics, National Employment, Hours, and Earnings.

APPENDIX A

Definitions of Fatality Causes

1. asphyxiation/inhalation of toxic vapor: lack of oxygen and/or inhalation of toxic gas, (excluding asphyxiation resulting from fire/explosion).
2. caught in stationary equipment: body or clothing caught pulling worker into equipment.
3. collapse of structure: building or other structure falling on worker, not including falling ladder, scaffold, aerial lift/ basket, platform, with a structure, trench collapse, or wall (earthen) collapse.
4. crushed/run-over of non-operator by operating construction equipment: non-operator run-over or crushed between equipment and ground or another object by an operator controlled piece of construction equipment.
5. crushed/run-over/trapped of operator by operating construction equipment: includes rollover and catching of body in equipment or between equipment and ground or other object while operating the equipment.*
6. crushed/run-over by construction equipment during maintenance/ modification: includes equipment/parts falling on worker while assembling or disassembling equipment.
7. crushed/run-over by highway vehicle: any run-over by non-construction equipment, including trains.
8. drown, non-lethal fall: non-lethal falls into water and flooding of container, trenches, etc.
9. electrocution by touching exposed wire/source: body part contacting the wire/source except when installing equipment or using a tool.
10. electrocution by equipment contacting wire
 - a. ladder
 - b. scaffold
 - c. crane/lifting equipment/boom/dump truck:
 - d. other: contact while handling materials, e g. gutters, iron rods, painting equipment, etc.
11. electrocution from equipment installation/tool use: includes failure to de-energize equipment, inappropriate energizing, contacting energized part with tool or body, and inadequately grounded tools or exposed tool wires.

*Includes fatalities resulting from asphyxiation/fire/explosion/drowning of trapped operators.

12. electric shock, other and unknown cause
13. elevator (struck/crushed by elevator or counter-weights):
14. fall from/with ladder: includes collapse/fall of ladder.
15. fall from roof; fall through roof: skylight or other opening.
16. fall from vehicle (vehicle/construction equipment): falls from vehicle or equipment while in motion or at rest.
17. fall from/with scaffold: includes collapse/fall of scaffold.
18. fall from/with bucket (aerial lift/basket): includes collapse/fall of bucket.
19. fall from/with structure (other than roof): fall through opening in the side or through the floor (not opening in the floor) and with the structure in a collapse.
20. fall from/with platform or catwalk (attached to structure: includes collapse/fall of platform.
21. fall through opening (other than roof): falls through stairwells, equipment openings, or other openings in a floor.
22. fall, other
23. fire/explosion/scalding, excluding electrical burns/explosions
24. heat/hypothermia
25. lifting operations: failure of equipment, inappropriate lifting, and all loading and unloading by crane operations except electrocution. (Includes objects falling and striking victim during lifting operation).
26. struck by falling object/projectile (including tip-overs): does not include collapse of structure, trench, earthen wall, or lifting operations.
27. trench collapse: includes earthen wall
28. unloading-loading equipment/material (except by crane): includes slipping and tipping over of construction equipment/material while loading and unloading.
29. lightning
30. crushed
31. unknown cause or other

APPENDIX B

**Figure B1. Comparison of Construction Fatality Causes
(Pooled Years 1995-2000 with 2001)**

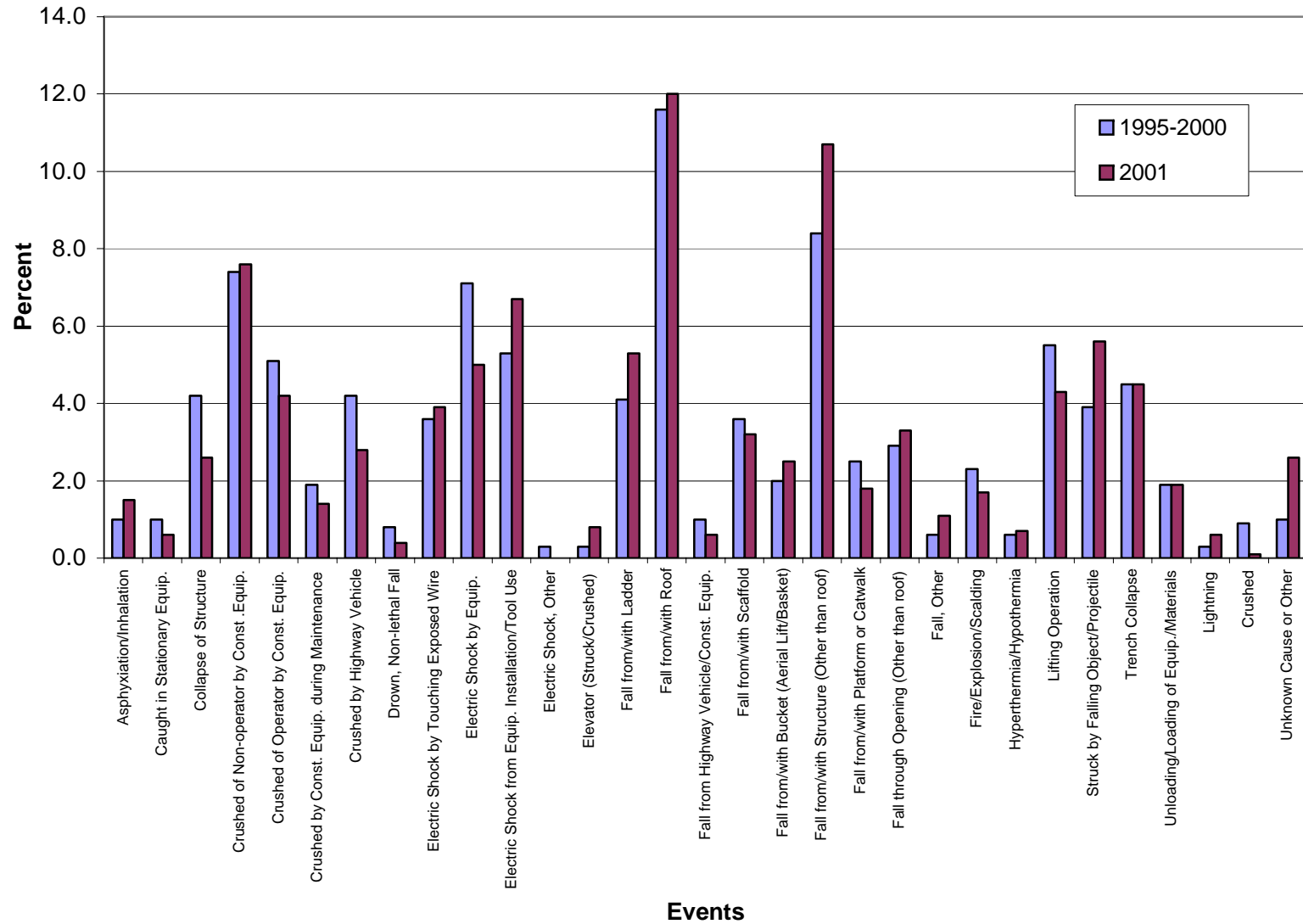


Figure B2. Frequency of Causes of Construction Fatality Events (2001)

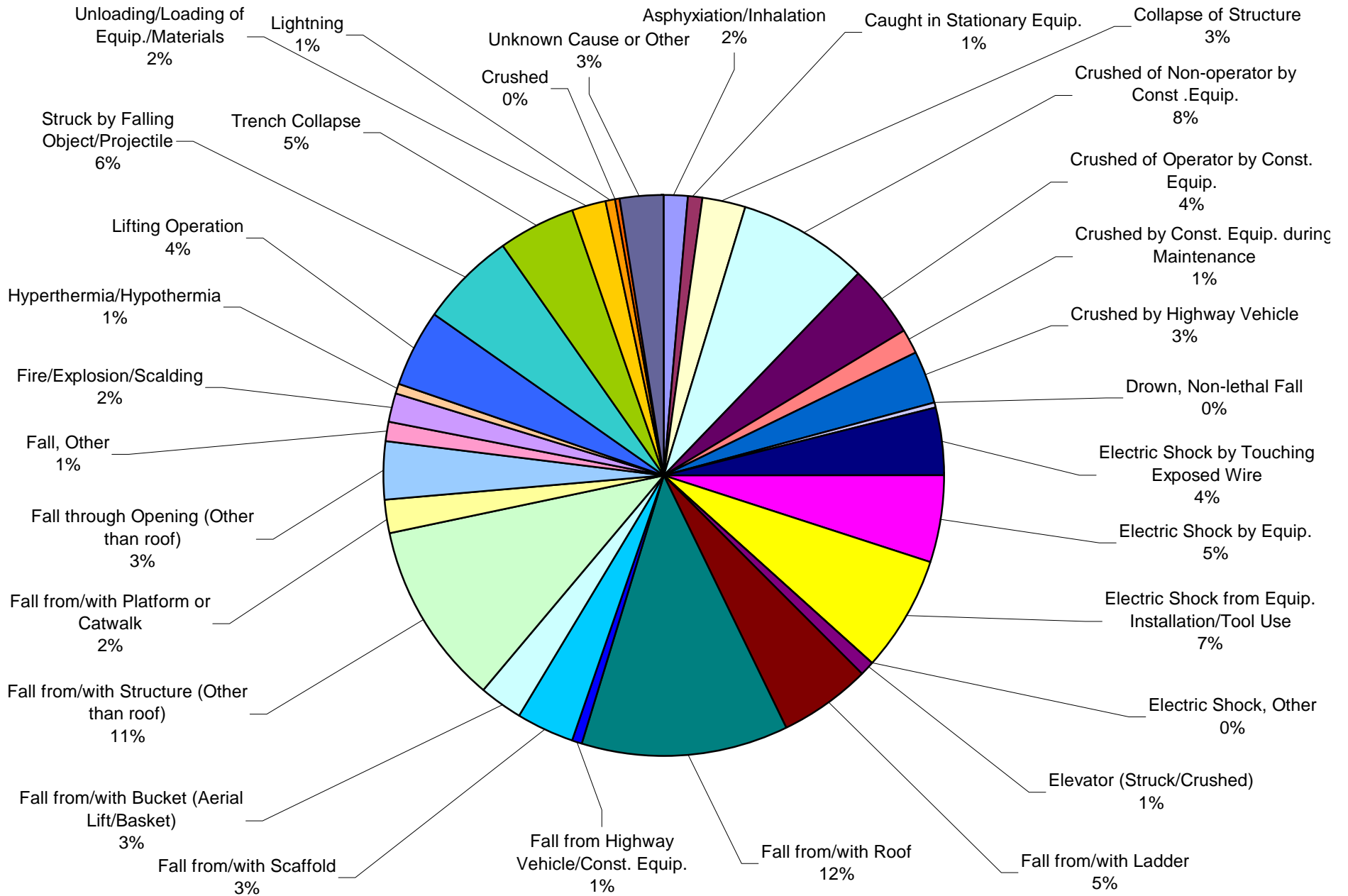


Figure B3. Frequency of Causes of Construction Fatality Events (1995-2000)

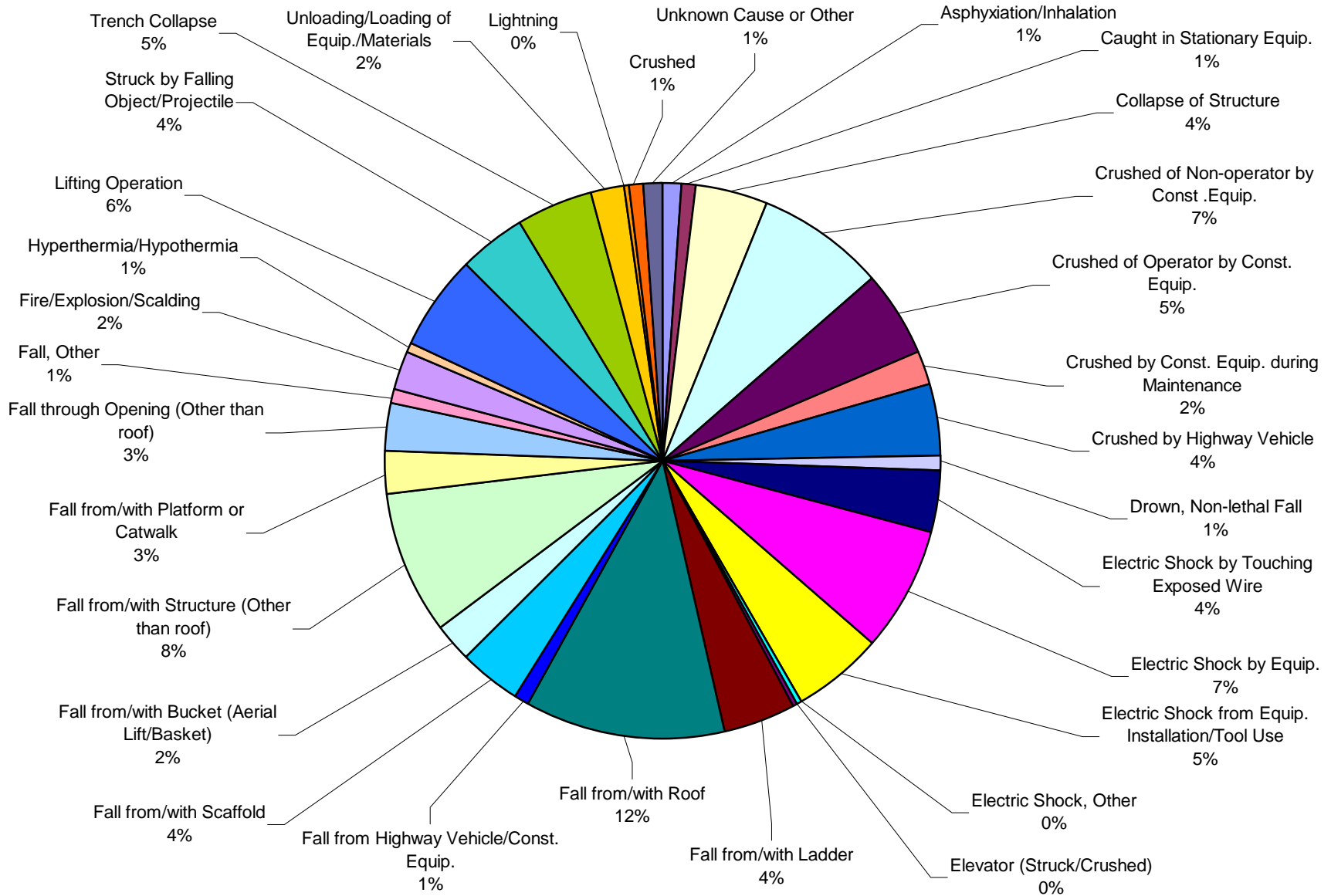
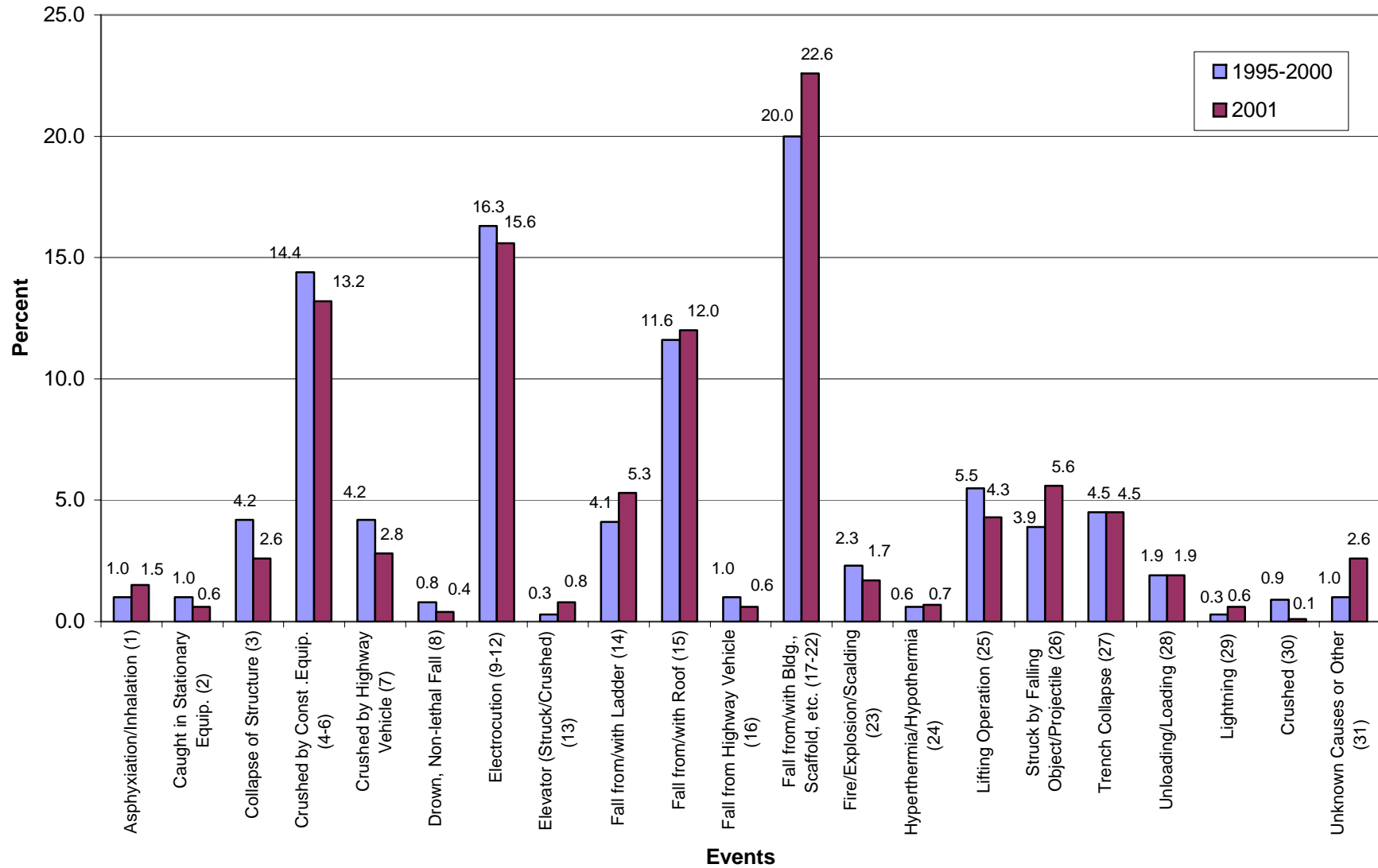


Figure B4. Comparison of Construction Fatality Causes - Combined Categories (Pooled Years 1995-2000 with 2001)



APPENDIX C

Table C1. Construction Fatal Events by End-Use Type, 2001

Event Causes	Description	Number of Frequency	Percent	Cumulative Percent
1	Bridge	24	3.3	3.3
2	Commercial Building	171	23.4	26.7
3	Contractor's Yard/Facility	7	1.0	27.7
4	Excavation, Landfill	12	1.6	29.3
5	Highway, Road, Street	74	10.1	39.5
6	Manufacturing Plant	34	4.7	44.1
7	Multi-Family Dwelling	48	6.6	50.7
8	Other Building	84	11.5	62.2
9	Other Heavy Construction	20	2.7	64.9
10	Pipeline	20	2.7	67.7
11	Powerline, Transmission Line	34	4.7	72.3
12	Powerplant	14	1.9	74.2
13	Refinery	6	0.8	75.1
14	Sewer/Water Treatment Plant	17	2.3	77.4
15	Shoreline Development, Dam, Reservoir	4	0.5	77.9
16	Single Family or Duplex Dwelling	133	18.2	96.2
17	Tower, Tank, Storage Elevator	28	3.8	100.00
		730	100.00	

The coding for these data could not be verified.

Table C2. Construction Fatal Events by Type of Project, 2001

Event Causes	Description	Number of Frequency	Percent	Cumulative Frequency
1	New, Addition and Alteration Construction	521	71.37	71.37
2	Maintenance, Repair and Demolition	151	20.68	92.05
3	Other	58	7.95	100.00
		<u>730</u>	<u>100.00</u>	

The coding for these data could not be verified.

Table C3. Construction Fatal Events by Four-Digit SIC, 2001

Event Causes	Description	SIC	Number of Frequency	Percent	Cumulative Percent
1	General Contractors - Single Family Houses	1521	24	3.2	3.2
2	General Contractors - Residential Buildings Other than Single Family	1522	13	1.8	5.0
3	Operative Builders - Single Family Housing, Multi-family Housing, Manufacturing, Light Industrial, Commercial, and Institutional Buildings	1531	4	0.5	5.5
4	General Contractors - Industrial Building and Warehouses	1541	18	2.4	8.0
5	General Contractors - Non-residential Buildings, other than Industrial and Warehouse	1542	43	5.8	13.8
6	Highway and Street Construction, Except Elevated Highways	1611	59	8.0	21.8
7	Bridge, Tunnel, and Elevated Highway Construction	1622	21	2.8	24.6
8	Water, Sewer, Pipeline, and Communications and Power Line Construction	1623	70	9.11	31.55
9	Heavy Construction, Not Elsewhere Classified	1629	25	3.4	37.4
10	Plumbing, Heating and Air-Conditioning	1711	27	3.6	41.1
11	Painting and Paper Hanging	1721	21	2.8	43.9
12	Electrical Work	1731	62	8.4	52.3
13	Masonry, Stone Setting, and Other Stone Work	1741	21	2.8	55.1
14	Plastering, Drywall, Acoustical, and Insulation Work	1742	10	1.4	56.5
15	Terrazzo, Tile, Marble, and Mosaic Work	1743	4	0.5	57.0
16	Carpentry Work	1751	40	5.4	62.4
18	Roofing, Siding, and Sheet Metal Work	1761	78	10.5	73.0
19	Concrete Work	1771	22	3.0	75.9
20	Water Well Drilling	1781	5	0.7	76.6
21	Structural Steel Erection	1791	52	7.0	83.6
22	Glass and Glazing Work	1793	3	0.4	84.1
23	Excavation Work	1794	22	3.0	87.0
24	Wrecking and Demolition Work	1795	21	2.8	89.9
25	Installation or Erection of Building Equipment, Not Elsewhere Classified	1796	13	1.8	91.6
26	Special Trade Contractors, Not Elsewhere Classified	1799	58	7.8	99.5
27	Trucking, Except Local	4213	1	0.1	99.6
28	Heavy Construction Equipment Rental and Leasing	7353	2	0.3	99.9
29	Legal Services	8111	1	0.1	100.00
			740	100.0	

The coding for these data could not be verified.

Table C4. Construction Fatal Events by Project Value, 2001

Event Causes	Description	Number of Frequency	Percent	Cumulative Percent
1	Under 50,000	242	33.2	33.2
2	50,000-250,000	139	19.0	52.2
3	250,000-500,000	60	8.2	60.4
4	500,000-1,000,000	75	10.3	70.7
5	1,000,000-5,000,000	98	13.4	84.1
6	5,000,000-20,000,000	76	10.4	94.5
7	20,000,000 and over	<u>40</u>	<u>5.5</u>	100.0
		730	100.0	

The coding for these data could not be verified.

Table C5. Construction Fatal Events by Construction Operation, 2001

Code	Description	Frequency	Percent of Events
01	Backfilling and compacting	3	0.4
02	Bituminous concrete placement	2	0.3
03	Construction of playing fields, tennis courts	1	0.1
04	Cutting concrete pavement	1	0.1
05	Demolition	23	3.1
06	Dredging	1	0.1
07	Elevator, escalator installation	4	0.5
09	Erecting structural steel	11	1.5
10	Erection of coffer dams, caissons	1	0.1
11	Excavation	10	1.4
12	Exterior masonry	10	1.4
13	Exterior cladding	2	0.3
14	Exterior carpentry	16	2.2
15	Exterior painting	5	0.7
16	Fencing, installing lights, signs, etc.	11	1.5
18	Forming	6	0.8
19	Forming for piers or pylons	1	0.1
20	Installing interior walls, ceilings, doors	11	1.5
21	Installing metal siding	7	0.9
22	Installing windows and doors, glazing	3	0.4
23	Installing culverts and incidental drainage	2	0.3
24	Installing equipment (HVAC and other)	21	2.8
25	Installing plumbing, lighting fixtures	7	0.9
26	Installing underground plumbing conduit	10	1.4
28	Interior masonry	8	1.1
29	Interior plumbing, ducting, electrical work	8	1.1
30	Interior carpentry	10	1.4
31	Interior painting and decorating	1	0.1
32	Landscaping	3	0.4
33	Loading dock forming and pouring	1	0.1
34	Paving	16	2.2
35	Pile driving	3	0.4
36	Placing bridge deck	1	0.1
37	Placing bridge girders and beams	5	0.7
38	Plastering	3	0.4
39	Pouring or installing floor decks	2	0.3
40	Pouring concrete floor at grade	1	0.1
41	Pouring concrete for piers, and pylons	5	0.7
42	Pouring concrete foundations and walls	4	0.5
43	Roofing	34	4.6
45	Site clearing and grubbing	4	0.5
46	Site grading and rock removal	5	0.7

47	Stripping and curing concrete	2	0.3
48	Surveying	1	0.1
50	Temporary work (buildings, facilities)	17	2.3
51	Traffic protection	5	0.7
52	Trenching, installing pipe	18	2.4
53	Waterproofing	3	0.4
55	Steel Erection Of Solid Web-Bolting-Up/Detail Work	1	0.1
56	Steel Erection Of Solid Web-Welding/Burning/Grinding	2	0.3
57	Steel Erection Of Solid Web-Plumbing-Up	1	0.1
58	Steel Erection Of Solid Web-Moving Point To Point	2	0.3
61	Steel Erection Of Open Web Steel Joists-Bolting-Up/Detail Work	2	0.3
62	Steel Erection Of Open Web Steel Joists-Welding/Burning/Grinding	1	0.1
65	Steel Erection Of Open Web Steel Joists-Landing Materials	1	0.1
66	Installation Of Decking-Initial Laying Deck (Incl Layout & Safety)	7	0.9
67	Installation Of Decking-Final Attachment Deck (Welding/Shear Studs/Etc)	2	0.3
68	Installation Of Decking-Flashing Of Decking	4	0.5
69	Installation Of Decking-Hoisting Bundles	3	0.4
70	Other Activities-Installing Ornamental And Architectural Steel	5	0.7
71	Other Activities-Post Decking Detail Work	10	1.4
00	Unknown	<u>370</u>	<u>50.0</u>
		740	100.0

The coding for these data could not be verified.