

**THE AVAILABILITY OF WOMEN, RACIAL MINORITIES, AND
HISPANICS FOR ON-SITE CONSTRUCTION EMPLOYMENT**

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Executive Summary

The Availability of Women, Racial Minorities, and Hispanics for On-Site Construction Employment

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This report develops a new method for calculating the employment availability of women, racial minorities, and Hispanics for on-site construction work in the construction industry. Appendix H provides availability figures for local labor markets nation-wide calculated using this new method.

After an introductory Chapter 1, Chapter 2 describes the construction industry. The chapter finds that, among “blue collar” occupations, construction offers careers for persons without extensive post-secondary education that are unusually attractive in both financial and non-financial terms. Construction firms are predominantly small, with 97.1% having fewer than 20 employees, and they primarily offer temporary, project-based employment. Construction employers are particularly resistant to changing the demographic composition of their workforces, for reasons that include strong incentives to avoid risks of work disruption and weak incentives to address human resource issues.

Chapter 3 provides further information of the size of construction firms. Our best estimate is that, federal prime contractors account for 2.5 million construction workers as employees and 1.9 million additional workers through subcontracts, about 53% of all workers in the industry. Firms with current federal prime contracts are somewhat larger than all firms in the industry, but still include many small firms; 76.5% of these firms report 20 or fewer employees.

Although the majority of construction firms are small, the majority of construction employees work for larger firms. Therefore, a requirement covering a limited number of large firms would cover the majority of workers employed by federal contractors and their subcontractors. For example, covering firms with 150 or more employees would encompass 70.2% of employees of federal construction prime contractors and their subcontractors (3.1 million workers) while requiring compliance from only 5.4% of firms (24,262 companies) (see Table 3.17).

Chapter 4 examines the utilization of women in the construction industry. Using standard methods of computing availability, it concludes that women represent about 3.0% of on-site workers in the construction industry today. Concurrently, women account for 5.5% of construction workers in industries other than construction, implying an underutilization of 220,000 women in the construction industry itself (see Table 4.2). This under-utilization has remained virtually unchanged for more than three decades. It

characterizes all major construction occupations, including laborers and helpers; construction equipment operators; and crafts such as carpenters, drywall installers, electricians, masons, operating engineers, painters, plumbers, and sheet metal workers.

Chapter 4 also relates these employment outcomes to attitudes and employment practices -- the “workplace culture” -- dominant throughout the construction industry. This culture includes: negative stereotypes about women’s ability to perform construction work; sexual tension injected into work contexts where it is irrelevant; intentions to reserve well-paid employment for men, “who deserve it”; and reluctance by supervisors and other officials to discipline perpetrators of discrimination. This culture underlies unwillingness to hire women even when they are as qualified as males. It also underlies harassing, hostile, and unhelpful behavior at worksites to deter women from applying for construction work and drive away those that are hired.

Chapter 5 reviews the utilization of racial and ethnic minorities in the construction industry. Applying standard methods of estimating availability, it concludes that:

- African Americans represent about 7.7% of on-site construction workers in the construction industry today, which leaves an under-utilization of about 388,000 workers (4.5 percentage points) compared to their expected representation (see Table 5.2). As with women, this under-utilization is spread widely among construction occupations and is not diminishing over time.
- Other racial minority groups -- Asians, American Indians/Alaskan Natives, Native Hawaiians/Other Pacific Islanders, and persons reporting themselves in more than two racial categories -- account for only a few percentage points of the construction work force except in some local labor markets. However, their combined nation-wide average representation of 4.0% is 0.9 percentage points (22,000 workers) below their expected representation, and this under-utilization characterizes a broad range of construction occupations.
- The representation of Hispanics in construction employment has more than quadrupled over the past four decades. Currently accounting for 27.2% of construction craft workers and 45.6% of construction laborers and helpers, Hispanics are often employed in construction occupations at a higher rate than expected based on their availability. Generally, under-representation is found only in specific locations, occupations, or employers.

According to Chapter 5, these employment outcomes once again reflect attitudes and employment practices prevalent in the construction industry. Here, important features of the industry’s culture include: stereotypes that racial/ethnic minorities are less capable, less reliable workers than their white counterparts; limited access by minorities to information and contact networks about employment opportunities; conscious intentions to preserve higher-level opportunities for whites against all “outsiders”; and reluctance by supervisors and other officials to discipline perpetrators of discriminatory acts. These attitudes underlie unwillingness to hire minorities even when they are as

qualified as whites, and harassing, hostile, and unhelpful behavior at worksites to deter minorities from applying for construction work and drive away those that are hired. In addition, many minority immigrants experience discrimination in wages and working conditions enforced by threats of deportation.

Chapters 4 and 5 imply that standard methods for calculating availability based on current employment in construction, such as those used in those chapters themselves, importantly under-estimate the expected representation of women and minorities. The methods therefore tend to reflect and perpetuate under-utilization rather than encourage and assist construction employers toward more inclusive employment. A method for estimating availability is needed that reflects women and racial minorities qualified and interested in on-site construction employment after “factoring out” the effect of the construction industry’s discriminatory attitudes and practices documented in Chapters 4 and 5.

A systematic, objective procedure for doing so is described in Chapter 6. Using data from the Department of Labor’s O*NET, this procedure identifies occupations whose workers are similar in physical abilities, cognitive abilities, and occupational interests to those currently in construction occupations. It then computes availability in on-site construction occupations by combining employment in construction occupations themselves with employment in this broader set of similar occupations. Under this procedure, the nation-wide availability of women for all on-site construction occupations combined is 8.1%, rather than the 3.0% availability based on persons currently employed in construction occupations alone. For African Americans, availability under the new method is 9.9%, rather than the 7.3% availability based on persons currently employed in those occupations (see Table 6.4).

The availability of women and minorities varies substantially among local labor markets. Chapter 7 therefore discusses the appropriate geographical definition of labor markets within which to implement Chapter 6’s methodology. Taking account of data accuracy, administrative feasibility, worker commuting, and the often-changing location of construction projects, the chapter opts for the 179 Economic Areas into which the U.S. Department of Commerce’s Bureau of Economic Analysis divides the nation.

Applying the methodologies developed in Chapters 6 and 7, Chapter 8 and Appendix H present availabilities for six demographic groups in each Economic Area nation-wide for all construction crafts combined, all laborers and helpers combined, and for 45 separate construction occupations. These figures are generated by applying the methodology developed in Chapter 6 to data from the Census Bureau’s American Community Survey 2006-2008, the most recent data currently available. The figures can readily be updated when the Census Bureau’s official Equal Employment Opportunity Tabulation based on the American Community Survey 2006-2010 becomes available.

Chapter 1

Introduction

The Subject of this Report

Among blue-collar employment in the American labor market, on-site construction occupations are some of the most prized. As this report documents, they provide above-average earnings for individuals with limited educational investment, occupational prestige above that for comparable blue-collar jobs, and strong long-term employment demand.

As in many prized occupations, the work force employed in on-site construction occupations has traditionally been predominantly male and white. In construction, that pattern has changed little over several decades and continues into the present. Today, only 3.0% of on-site construction workers are women, and only 7.3% are African American.

To some extent, such low representation reflects factors not controlled by individual employers. For instance, a larger proportion of women than men may not want the physically-demanding work on-site construction occupations involve, and a higher proportion of minorities than whites may not meet educational prerequisites. However, as this report documents, the low representation also reflects widespread hostile attitudes and exclusionary practices within the construction industry.

Concern about these latter circumstances has made construction a focus for affirmative action overseen by the Office of Federal Contract Compliance Programs (OFCCP). The subject of this report is the current need for, and appropriate design of, availability figures for affirmative action in on-site construction employment in the construction industry. The current version of affirmative action requirements for that employment is summarized in OFCCP's *Technical Assistance Guide for Federal Construction Contractors*, most recently issued in May 2009.¹ The present report considers fresh conceptual approaches and updated empirical data on subjects addressed in that *Guide*.

Outline of this Report

The report begins in Chapter 2 with a description of the construction industry and the employers and occupations central to its structure and operations. Chapter 3 provides additional detail on the number and size of firms in the industry and in the subset of firms holding federal contracts.

¹ US OFCCP (2009A).

Chapters 4 and 5 review nation-wide statistics on the utilization of gender, race, and ethnic minority groups as construction workers. The chapters also draw on scholarly research and other sources to describe the relationship between those statistics and attitudes and employment practices prevalent in the industry.

Chapter 6 describes a new methodology for calculating availabilities for women and minorities qualified for and interested in on-site construction employment. Because this new methodology “factors out” the effect of the industry attitudes and practices discussed in Chapters 4 and 5, it provides more accurate, meaningful availabilities than are produced using current standard procedures.

Chapter 7 discusses the local labor markets in which to implement this new methodology.

Finally, Chapter 8 summarizes and then implements the methodology developed in Chapter 6. The resulting employment availabilities are presented in Appendix H for six gender, race, and ethnicity groups in 179 local labor markets. Availabilities are provided for two broad categories of construction work -- craft workers and laborers/helpers -- as well as 45 separate construction occupations.

To enhance the readability of this complex, often-technical report, many detailed tables appear in Appendices A through H rather than in the document itself. However, the contents of these appendices are integral to the report and should not be overlooked.

Chapter 2

The Construction Industry

This chapter first provides basic information about the structure and operations of the construction industry. It then discusses the “industry logic” governing the behavior of firms as they respond to the circumstances in which the industry operates. Later in this report, both types of information will be drawn upon to help explain employment practices in this industry.

Construction Firms

The construction industry prepares sites for, builds, renovates, and tears down the nation’s houses, factories, schools, offices, airports, roads and bridges. With annual revenues of \$1.14 trillion, or 8.2% of the nation’s Gross Domestic Product,¹ it is one of the nation’s largest industries. Correspondingly, it is one of the country’s largest employers. In 2008, it provided about 7.2 million wage and salary jobs plus employment for 1.8 million self-employed and unpaid family workers.² These positions are distributed across the country in approximately the same way as the general population.

The construction industry is generally divided into three major segments:

- Building construction: Production of residential, industrial, commercial, and other types of structures.
- Heavy and civil engineering construction: Production of infrastructure projects such as roads, sewers, and bridges.
- Specialty trades: Specialized activities such as carpentry, painting, plumbing, and electrical work which are part of the overall work required to complete buildings or infrastructure.

Individual construction firms usually specialize in one of these three segments, as well as in the size of projects.

In terms of roles within projects, the most important distinction is between general contractors and subcontractors. Subcontractors are responsible for building a part of a project or performing a specific scope of work, such as installing the wiring and electrical systems within a building. In contrast, general contractors are responsible to project owners for managing, organizing, and delivering completed projects. Since projects commonly involve many specialty tasks, and these must be executed in a

¹ Simonson (2008). Data are for 2007.

² US Bureau of Labor Statistics (2010A), p. 2.

complex sequence, general contractors' responsibilities are substantial and call on considerable skills in project management.³

Firms may also cross over among sectors and roles. For example, a moderate size carpentry firm may serve as a general contractor for construction of a small building but as a framing subcontractor during construction of a multi-house residential subdivision.

In completing a project, general contractors use their own employees, those of subcontractors, or a mix. Typically, general contractors for heavy and civil construction self-perform a large proportion of the work, using subcontractors only for specialized tasks. In contrast, building contractors tend to subcontract a high proportion of project work hours. In some cases, general contractors subcontract all actual construction, retaining only project management and coordination duties.

On both building and heavy projects, the general contractor typically selects subcontractors. General contractors sometimes work with the same subcontractors over multiple projects.⁴

General contractors work for project owners, such as a local government, a state department of transportation, a private real estate developer, or an individual homeowner. In 2006, about 22% of U.S. construction was on public projects and the rest on private ones.⁵

Public owners include government agencies at the federal, state, municipal, or special district levels. They typically use formal bidding competitions with detailed designs and specifications; employ inspectors to monitor contractors' work; make progress payments as work is satisfactorily completed; and require that contractors post performance ("surety") bonds, usually obtained from insurance companies. Private project owners or their lenders may also employ some of these same procedures, particularly for large projects. Firms' financial capacity, performance track record, and networks of business relationships affect both their likelihood of winning bids and their ability to obtain performance bonds.⁶

Construction firms or workers are not federally licensed, but state and local governments often require licensing for trades such as electricians and plumbers. Contracting firms in such lines of work, or their employees performing that work, are

³ Weil (2005).

⁴ For example, Eccles (1981) and Constantino & Pietroforte (2002) observe that some general contractors form "quasi-firms" with small numbers of subcontractors. These quasi-firms work together continuously over long periods and rarely test their membership through competitive bidding.

⁵ O'Neal & Berning (2007), p. 3.

⁶ O'Neal & Berning (2007), pp. 4-8.

licensed by about three-quarters of states, and in the remaining states, often by local governments.⁷

Construction Occupations

In 2008, employment in construction (including self-employment) was divided among the three industry segments defined earlier in this chapters as follows:⁸

- 64% in specialty trades firms;
- 23% in building construction firms; and
- 13% in heavy and civil engineering firms

Compared to most “blue collar” occupations, construction offers well-paid jobs and careers -- specifically, those increasingly-rare opportunities to earn “middle class,” family-supporting incomes without a college degree. Table 2.1 presents average annual earnings for selected construction trades, ranging as high as \$79,000. The average for construction and extraction occupations, \$39,799, is between 25% and 75% higher than the counterpart figures of \$31,614 for factory production workers, \$31,425 for transportation and materials moving workers, \$24,272 for maintenance workers, or \$22,832 for farming, fisheries, and forestry occupations.⁹

Construction occupations offer non-financial attractions as well. Particularly in more skilled construction occupations, daily work offers variety in work assignments, challenging problem solving, and opportunities for self management.¹⁰ Public opinion polls report occupational prestige scores of, for example, 45 for electricians, 38 for plumbers, and 37 for sheet metal workers, on a scale in which factory production workers rate between 20 and 25.¹¹ Thus, the construction trades are often viewed as the “hallmark” of the working class and practitioners of these crafts considered “Blue Collar Aristocrats.”¹²

⁷ O’Neal & Berning (2007), p. 16.

⁸ US BLS (2010A), p. 2

⁹ US BLS (2006), Table 2.1

¹⁰ Eisenberg (2001), p. 1.

¹¹ Nakao & Treas (1992).

¹² Paap (2008), p. 373; Bilginsoy (2005); LeMasters (1975).

Table 2.1¹³
Average Annual Earnings in Selected Construction
Occupations, National Compensation Survey, 2006

(a)	(b)
Occupation	Annual Earnings
Elevator installers & repairers	\$78,880
Structural iron and steel workers	\$57,713
Construction & building inspectors	\$52,408
Brick masons, block masons, & stone masons	\$50,298
Electricians	\$47,453
Pipelayers, plumbers, pipefitters, & steamfitters	\$46,809
Carpenters	\$41,688
Carpet, floor, and tile installers & finishers	\$39,975
Sheet metal workers	\$39,832
Misc. construction equipment operators	\$39,174
Cement masons, concrete finishers & terrazzo workers	\$38,946
Hazardous materials removal workers	\$38,409
Glaziers	\$37,896
Drywall installers, ceiling tile installers, & tapers	\$36,554
Plasterers & stucco masons	\$34,150
Insulation workers	\$34,039
Misc. construction & related workers	\$32,868
Highway maintenance workers	\$31,518
Paperhangers	\$31,143
Painters, construction & maintenance	\$30,991
Roofers	\$30,627
Paving, surfacing, & tamping equipment operators	\$29,873
Construction laborers	\$29,802
Helpers, construction trades	\$25,700

The principal disadvantage of careers in construction is employment instability. Most construction workers do not have permanent employers but rather are hired on a project-by-project basis. Thus, they often do not have the job security or long-term fringe benefits that long-term employees enjoy.¹⁴ When one project ends, replacement work may be difficult to obtain. The industry is highly sensitive to the state of national and local economies, leaving construction workers vulnerable to long periods of slow work or

¹³ US Bureau of Labor Statistics (2007).

¹⁴ However, unionized workers often receive fringe benefits such as pensions and health insurance through their unions.

unemployment. Currently, the construction industry is seriously affected by the credit crisis and recession that began in December 2007. Seasonally adjusted construction industry employment fell in June 2010 to the lowest level since July 1996, with the industry's unemployment rate at 20.1%, more than double the national average.¹⁵

In many cases, to qualify for construction work workers must possess considerable strength and stamina. Construction work also may require other physical attributes, such as tolerance for exposure to harsh weather, willingness to work with potentially dangerous tools and equipment, and the ability to function in workspaces that may be cramped, cluttered, far off the ground, or on temporary scaffolding. However, as Chapter 6 will examine in detail, these requirements vary among construction occupations and should not be over-generalized to mean that all construction work is extremely physically demanding on all dimensions. For example, operating engineers who run tower cranes need to be able to climb to great heights, but they do not need unusual physical strength to operate their control levers. Roofers require considerable strength to lift heavy materials, but for electricians, strength requirements are more limited and fine motor skills are more important. Highway maintenance workers are exposed to sun, wind, and rain, but drywall installers generally are not.

Considerable variation is also evident among construction occupations in the level of cognitive skills involved and the amount of formal training required. Table 2.2 describes the educational preparation for selected construction occupations according to the Department of Labor-sponsored O'NET.¹⁶ The table reports that on-site construction occupations range across a relatively wide range of skill levels, here labeled "Job Zones." At one end of the spectrum, occupations in Job Zone One, such as construction laborers,¹⁷ typically do not demand a high school diploma, prior training, or substantial work experience. At the other end, skilled crafts such as electricians and plumbers in Job Zone Three require several years of post-secondary classroom training plus several years of supervised work experience.

Apprenticeships offer one traditional way to meet these latter requirements. As Table 2.3 illustrates, formally registered apprenticeships are available in range of construction occupations. About 70% of apprentices are joint union-management activities.¹⁸ Typical construction apprenticeships involve classroom work, on-the-job

¹⁵ AGC of America (2010).

¹⁶ This data source is described in Chapter 6.

¹⁷ In most analyses of construction occupations, including those by the US Bureau of Labor Statistics, the term "laborer" is used to refer to an occupation which does not require training such as through a registered apprenticeship. However, training organizations such as those affiliated with the Laborers International Union of North America may offer registered apprenticeships treating the construction laborer occupation as a skilled craft. Throughout this report, the term "laborer" is used in the former sense, to refer to an occupation classified as unskilled.

¹⁸ Bilginsoy (2005), p. 454. The remaining 30% are typically organized by contractors or contractor associations.

Table 2.2 ¹⁹
Skill Development Required for
Selected Construction Occupations

(a)	(b)	(c)
Job Zone	Skill Development	Occupations
1	High school diploma not usually required. Skills usually acquired in a few days to a few months of experience.	Carpet installers Construction laborers Helpers--brickmasons, blockmasons Helpers--painters, plasterers Septic tank servicers & sewer cleaners
2	High school diploma usually required. Also requires a few months to one year of on-the-job supervised experience. Recognized apprenticeships may be available.	Brickmasons & blockmasons Carpenters Floor layers Floor sanders & finishers Tile & marble setters Paving equip. operators Pile-driver operators Drywall & ceiling tile installers Glaziers Insulation workers Painters Paperhangers Pipelayers Plasterers & stucco masons Reinforcing iron & rebar workers Roofers Sheet metal workers Structural iron & steel workers Helpers--electricians, plumbers Fence erectors Hazardous materials removal workers Highway maintenance workers
3	Usually requires high school diploma plus formal training in a vocational school, associate's degree program, or recognized apprenticeship. Also requires from one to several years supervised experience.	Stonemasons Cement masons & concrete finishers Operating engineers Electricians Pipefitters & steamfitters Plumbers Elevator installers & repairers

¹⁹ Source: O*NET data system described in Chapter 6.

Table 2.3²⁰
Selected Construction-Related Registered
Apprenticeships in Iowa, 2009

(a)	(b)
Air conditioning installer, window	Hazardous waste material tech
Asphalt paving machine operator	Inspector, building
Boilermaker fitter	Insulation worker
Boilermaker I	Line erector
Boilermaker II	Line Installer
Bricklayer (brick & tile)	Line repairer
Bricklayer (construction)	Locksmith
Cabinetmaker	Marble finisher
Carpenter	Marble setter
Carpenter, interior systems	Mosaic worker
Carpenter, commercial interior	Operating engineer
Carpenter, framing & finishing	Ornamental iron worker
Carpenter, forms & concrete	Painter, construction
Carpenter, advanced systems	Painter, professional & kindred
Carpenter, rough	Paperhanger
Carpet cutter	Pavement striper
Carpet layer	Pipe fitter - sprinkler fitter
Cement mason	Pipe fitter, construction
Chimney repairer	Plasterer
Construction craft laborer	Plumber
Drilling machine operator	Pointer cleaner caulker
Dry-wall applicator	Pump erector, construction
Electrician	Reinforcing ironworker, concrete
Elevator constructor mechanic	Roofer
Elevator constructor	Sheet metal worker
Fence erector	Structural steel/ironworker
Field tech concrete/masonry inspector	Taper
Field tech soil/asphalt inspector	Terrazzo finisher
Floor cover installer	Terrazzo worker
Floor layer	Tile finisher
Furnace installer	Tile setter
Gas main fitter	Welder
Glazier	Welder fitter
Glazier, stained glass	Well drill operation, construction

²⁰ Table 2.3 is excerpted from Iowa Office of Apprenticeship (2010). Registered apprenticeships refer to training registered with the US Department of Labor's Office of Apprenticeship (OA) or a state apprenticeship agency recognized by Department of Labor. Registration is voluntary and requires that the program comply with standards governing program operations including admission, affirmative action, wages, performance, and assessment.

experience, and competency testing, moving enrollees over multiple years from apprentices to journey workers and master craft workers.

Workers also enter many construction trades without apprenticeships, through training in vocational schools or community colleges or less formal on-the-job experience. In addition, construction workers born outside the U.S. often bring craft skills acquired prior to immigration. When an occupation requires a state or local license or when hiring is limited to workers referred by a union, construction employers may have only limited discretion to judge individual workers' qualifications. However, in many other circumstances, in making decisions about hiring and work assignments, employers make their own assessment of individuals' qualifications.

The process of seeking construction work varies. For unionized construction contractors, the collective bargaining agreement between an employer and a union often specifies that the union will be the exclusive or priority source of workers to be employed on a project, with the employer having at most a limited right to reject individual workers referred to it. In this case, union members register with the union's "hiring hall" and are then referred for positions based on criteria such as seniority in the local or order of registration as out of work.²¹

In non-unionized situations, the job search process is generally more informal. Job seekers may present themselves at construction job sites, especially where contractors have posted "help wanted" notices. Workers may inquire among their friends, neighbors, family, and acquaintances about potential work; correspondingly, employers often "pass the word" among their current employees about vacancies and encourage them to refer individuals. Jobs seekers may also seek out "help wanted" announcements that employers place in newspapers, on the internet, or with construction training programs or public or private employment agencies.²² A characteristic common to these search methods is that they are more likely to work well for job seekers who have extensive networks of contacts with persons who are themselves well placed in construction work, have access to information about opportunities that are not publicly advertised, and can provide introductions that employers trust. Chapters 4 and 5 will discuss further the implications of this circumstance.

The construction industry employs the vast majority of workers in some construction occupations, such as insulation workers (91.7%). However, other industries -- including manufacturing, transportation, public utilities, real estate, and retailing -- also employ individuals in these occupations. For example, 56% of painters and paper hangers, 50% of floor covering installers, and 44% of carpenters are employed outside the construction industry.²³ This fact will prove important in Chapters 4 and 5, where

²¹ Union Democracy (2010).

²² US Bureau of Labor Statistics (2010C).

²³ US Bureau of Labor Statistics (2010C), p. 4.

employment in construction occupations in non-construction industries is used to benchmark employment patterns within the construction industry.

Construction Unions

Historically, construction has been one of the most unionized industries in the US private sector. However, the “union density”²⁴ varies substantially from location to location in the nation, reflecting both state laws²⁵ and other circumstance. Certain cities have long been recognized as centers of union strength -- for example, Boston, Chicago, Milwaukee, New York, San Francisco, and Seattle.

Even in these “union towns,” the building trades have witnessed continuing erosion of union dominance over the past several decades. Nation-wide, the percentage of unionized construction work declined continuously from almost 50% in 1966 to less than 33% in 1983 and less than 15% in 2004.²⁶

Union construction workers almost universally receive higher wage rates than their non-union counterparts. In 2009, the median weekly earnings of full time unionized employees in construction and extraction industries was \$1,023, or 157% of the \$643 median for their non-union counterparts.²⁷ Union members are also substantially more likely to receive fringe benefits such as health insurance and pension contributions. Moreover, union members may benefit from monitoring of their work situation and advocacy on their behalf by shop stewards and other union officials. This monitoring may cover not only provisions of union-management collective bargaining agreements but also issues such as workplace safety and treatment of individual employees.

Table 2.4 lists some principal unions representing on-site construction workers.

²⁴ “Union density” is the number of workers currently enrolled in a union divided by the number of workers potentially enrolled.

²⁵ Twenty states have “right to work laws” limiting mandatory union membership or dues payments, and these laws are strongly associated with low union density (National Right to Work Legal Defense Fund, 2010).

²⁶ Erlich & Grabelsky (2005). See also Weil (2005).

²⁷ US Bureau of Labor Statistics (2010D), Table 4.

Table 2.4 ²⁸
Selected Unions Representing Construction Workers

(a)	(b)	(c)	(d)
Construction Occupation	% of Workers who are Unionized	Largest Union	Membership, 2003
Ironworkers	61%	International Association of Bridge, Structural, Ornamental & Reinforcing Iron Workers	130,928
Sheet metal workers	32%	Sheet Metal Workers International Association.	148,378
Plumbers	29%	United Association of the Journeymen & Apprentices of the Plumbing & Pipefitting Industry of the U.S. & Canada	325,914
Electricians	27%	International Brotherhood of Electrical Workers	700,548
Operating engineers	25%	International Union of Operating Engineers	390,388
Brick masons	21%	International Union of Bricklayers & Allied Craftworkers	101,499
Truck drivers	19%	International Brotherhood of Teamsters	1,350,000
Carpenters	13%	United Brotherhood of Carpenters & Joiners of America	531,839
Laborers	11%	Laborers' International Union of North America	840,180
Painters	6%	International Association of Painters & Allied Trades	115,511
Plasters, cement masons	?	Operative Plasterers' and Cement Masons' International Association	39,763
Elevator installers	?	International Union of Elevator Constructors	25,000

Resistance to Change

An important general characteristic of the construction industry is the industry's resistance to change. To be sure, all industries have internal forces that tend to perpetuate current modes of operating. These forces commonly include firms' concerns about the

²⁸ Columns (a) and (b) are from CPWR (2007), Table 11. Columns (c) and (d) are from Working Life (2003) or union websites. Union membership figures include workers outside the construction industry and, in some case, outside construction occupations.

risks of untried approaches, the cumulative training and experience in established practices embodied in the current work force, and firms' investment in capital equipment designed to be operated in only certain ways. However, the construction industry is widely noted to be particularly slow moving, not only on employment matters but in essentially all aspects of its operations from building materials and technology to project management and budgeting practices. This style is so pervasive that it has earned construction the nickname "the industry that time forgot."²⁹

Within this generally conservative environment, three circumstances make the industry particularly slow to change employment practices.

The first circumstance is intense competition among firms. As Chapter Three will detail, the construction industry is numerically dominated by small businesses; in an industry of more than 750,000 companies, only about 500 firms have 500 or more employees. This proliferation of small enterprises reflects the relative ease of entry into the business associated with low fixed overhead and limited capital requirements. Employees can be hired and equipment leased only when needed, or their services can be flexibly acquired through subcontracting. Accordingly, construction offers more opportunities than most industries for individuals to own and run their own businesses.

When this ease of entry is combined with project owners' tendency to select the lowest cost bidder, the consequence is that competition is aggressive competition and low profit margins.³⁰ According to the 2007 Construction Industry Annual Financial survey, net profit margin before income taxes in construction averaged 2.7%, and the median return on assets was 8.8%, substantially below that in many other industries.³¹ In addition, it is not uncommon for construction contracts to contain explicit financial penalties for construction delays.

The combination of low margins, considerable likelihood for unexpected problems arising during project execution, and small firms shouldering large risks by undertaking large projects creates an often volatile financial outlook for construction

²⁹ The term is from LePatner (2007). See also Sabol (2007), pp. 1-14, and Prieto (2009). A recent illustration of the industry's tendency to adhere conservatively to established practices is provided by construction firms' strategic planning in today's recessionary economic climate (Fails, 2009). This study found that most contractors have not been explicitly assessing their industry context in preparation for challenging times and instead "...find themselves holding on to the strategy used during the glory days of the most recent market expansion."

³⁰ Mochtar & Arditi (2001). Indeed, profit margins are sometimes so low that they illustrate "the winner's curse." This phrase refers to instances of intense competition in which the only way a bidder wins is by underestimating costs to such an extent that the project will lose money for the winner (Dyer & Kagel, 2010).

³¹ CFMA (2007).

firms. Although successful projects can be financially very good for construction firms, bad projects can be very bad and readily lead to bankruptcy.³²

It is therefore not surprising that construction contractors tend to be intensely concerned to control construction costs, avoid project delays, and reduce operating risks.³³ As Chapter Four will discuss, many employers assume that female and minority employees are less competent to perform construction work, as well as potential sources of conflict and discord in the workplace. Applying the logic of cost control and risk minimization just described, such employers tend to avoid hiring these employees as a way to reduce the risk of potentially disastrous lower productivity or project delays. Such employers tend conservatively to favor employees whose past performance they know, or at least who look like employees whose past performance they know.

A second circumstance slowing changes in construction employment practices is the industry's focus on short term projects. Construction is "inherently a site-specific project based activity."³⁴ Each project requires "a unique combination of labor and material inputs, performed and coordinated onsite, lacking controlled factory environments."³⁵ Moreover, the workforce on one project tends not to remain together for subsequent projects, so that lessons learned on one project tend not to be remembered.³⁶ Accordingly, there is little tradition within the construction industry of continuous experimentation with production processes seeking incremental improvements such as is common, for example, in many manufacturing industries. Instead, construction firms tend to adhere as much as possible to standardized, "tried and true" work processes.

A related consideration working against innovations in construction practices is the complex structure of much construction work, typically involving coordination of workers in a number of different crafts, often working for different subcontractors or joint venture partners. If one firm's employees do not operate in the expected, standardized way, that deviation may disrupt sequencing and coordination with the work of others.³⁷ To avoid such disruptions, all parties involved in a construction project -- including project owners, general contractors, subcontractors, building inspectors, unions, and

³² For example, cost overruns of 25-33% are not uncommon on projects that contractors have agreed to perform for a fixed price. With an 8% profit margin, a contract with a 33% cost overrun would more than wipe out all profits from four other projects of equal size (O'Neal & Berning, 2004, p. 12).

³³ Weil (2005).

³⁴ Cox & Thompson (1997), p. 128.

³⁵ Welling & Kamann (2001), p. 1.

³⁶ Bjorkegren (1998), p. 110.

³⁷ Paap (2008), p. 379.

material suppliers -- rely on shared understandings of well-established, standardized construction practices.³⁸ In those circumstances, an innovative practice deviating from shared expectations, even if more efficient in itself, might create wider inefficiencies that more than offset its benefits.

Changes in employment practices, including the demographic characteristics of construction workforce, do not necessarily raise the same concerns about standardization and coordination as innovations in “hands on” construction operations. Nevertheless, they are influenced by the atmosphere created by pressures against disruptive changes in components of a complex system. In this spirit, employers might not only continue to hire workers of the same demographic background but also resist changes in employment practices covering, for example, recruitment sources, criteria for hiring, or enforcement of anti-discrimination policies.

A third and final circumstance slowing change in employment practices is the fragmented relationships between employers and on-site construction employees. As noted above, maintaining workforce flexibility by hiring employees only for specific projects offers the majority of construction firms an important way to manage their labor costs. However, from the employees’ perspective, that practice makes their relationship with employers “dispersed, detached and discontinuous.”³⁹ In consequence, employers usually have little incentive to get to know workers individually or assess their skills and potential accurately. Instead, decisions on matters such as hiring and work assignments are often made quickly and based on limited information, relying on quick terminations to remedy mistakes. As Chapters 4 and 5 will discuss, such decision-making tends to heighten the influence of stereotypes on those decisions, as well as limit the opportunity for experience with new types of workers to change employers’ stereotypes.

Another aspect of this same circumstance is that construction employers generally consider human resource management procedures costs rather than investments, pay them little attention, and invest as few resources in them as possible. Authority to manage a project’s workforce typically resides with the project’s line manager whose primary concerns are costs, schedules, and customer satisfaction, and whose incentives tend to be as short term as the projects they supervise. “People-related” issues are, at most, a secondary priority.⁴⁰ Furthermore, these project managers seldom have any training in human resource management or professional human resources staff to assist them. In consequence, human resource management practices commonly adopted in other industries are often not applied in the construction industry.⁴¹

³⁸ The network of individuals holding these understandings and expectations in common is sometimes referred to as the “community of practice” (Gongla & Rizutto, 2001; Brown & Duguid, 1998, p. 91).

³⁹ National Economic Development & Law Center (1994), p. 6.

⁴⁰ Loosemore et al. (2003), p. 5.

⁴¹ Bielby (2008).

Chapters 4 and 5 of this report will explore further the effects of the industry's resistance to change on employment outcomes for women and minorities.

Chapter 3

Federal Contractors

To provide more detail than Chapter 2's overview, this chapter examines the number and size of construction firms nation-wide and the subset of those firms that are federal contractors. Within the chapter, the analyses most immediately applicable to policy issues are in the last section, titled "Analyzing Employee Coverage."

All Construction Firms

A number of databases -- including the U.S. Census Bureau's County Business Patterns, the Economic Census of the U.S., and the EEOC's "EEO-1" Job Patterns in Private Industry -- were reviewed for information on firms in the industry. Appendix Table E.1 in Appendix E summarizes key characteristics of these data sources. From this review, we conclude that, for portraying the overall industry, the U.S. Census Bureau's County Business Patterns (CBP) provides the best combination of broad industry coverage, recent information, and detailed data on firm size. CBP is updated annually, and at the time of this analysis, the most recent version was for 2008.

Nation-wide, 773,614 construction firms are listed in CBP for 2008, or 10.2% of the 7.6 million firms in all industries. Tables 3.1 and 3.2 report the distribution of these firms in terms of number of employees.¹

The most striking pattern revealed by these tables is the predominance of very small firms. According to Table 3.2, 65.1% of all construction firms -- essentially, two out of three -- have fewer than five employees, and 97.1% have fewer than 50.

This small firm predominance is evident throughout the sub-sectors of the construction industry examined in these tables and Appendix Tables E.2 and E.3. However, it is particularly evident in some sectors. For example, according to Appendix Table E.2, among Flooring Contractors, not a single firm out of 16,070 has 500 or more employees. In contrast, among Constructors of Oil and Gas Pipelines, 49 (2.5%) of 1,946 firms are that large. Generally, sectors such as Heavy and Civil Engineering and Construction of Non-Residential Buildings have higher proportions of larger firms than sectors such as Construction of Residential Buildings and Specialty Trade Contractors. However, no sector has a majority of large firms. Adding all types of construction firms together, only 539 construction firms nation-wide have 500 or more employees. The firms constitute 0.1% -- one tenth of one percent -- of all firms in the industry.

¹ Tables 3.1 and 3.2 are excerpted from Appendix Tables E.2 and E.3 in Appendix E.

Table 3.1
Construction Firms, Nationwide,
by Number of Employees,
County Business Patterns 2008

(a)	(b)	(c)	(d)	(e)
Number of Employees	Industry Sector and NAICS Code			
	236	237	238	23
	Construction of Buildings	Heavy and Civil Engineering Construction	Specialty Trade Contractors	All Construction Firms
1-4	71.9%	51.2%	63.2%	65.1%
5-9	14.6%	17.3%	17.1%	16.3%
10-19	7.5%	13.1%	10.3%	9.6%
20-49	4.2%	10.7%	6.4%	6.0%
50-99	1.2%	4.2%	1.9%	1.8%
100-249	0.5%	2.5%	0.9%	0.9%
250-499	0.1%	0.7%	0.2%	0.2%
500-999	0.0%	0.2%	0.0%	0.0%
1,000 +	0.0%	0.1%	0.0%	0.0%
Total %	100.0%	100.0%	100.0%	100.0%
Total Firms	232,634	48,030	492,950	773,614

Table 3.2
Construction Firms, Nationwide,
by Number of Employees,
Cumulative Percentage
County Business Patterns 2008

(a)	(b)	(c)	(d)	(e)
Number of Employees	Industry Sector and NAICS Code			
	236	237	238	23
	Construction of Buildings	Heavy and Civil Engineering Construction	Specialty Trade Contractors	All Construction Firms
1-4	71.9%	51.2%	63.2%	65.1%
5-9	86.5%	68.5%	80.3%	81.4%
10-19	93.9%	81.6%	90.6%	91.0%
20-49	98.2%	92.4%	97.0%	97.1%
50-99	99.3%	96.5%	98.9%	98.9%
100-249	99.8%	99.0%	99.8%	99.7%
250-499	100.0%	99.7%	99.9%	99.9%
500-999	100.0%	99.9%	100.0%	100.0%
1,000 +	100.0%	100.0%	100.0%	100.0%

CBP data do not permit analysis of firm revenues parallel to Tables 3.1 and 3.2. However, a related analysis, presented in Table 3.3,² is consistent with the predominance of small firms just described. According to Table 3.3, firms with 1-4 employees, which Table 3.1 showed to account for 65.1% of all construction firms, average less than \$100,000 in annual revenues. Firms typically achieve revenues of \$1 million per year only when they have 20 or more employees, which describes only 9.0% of all construction firms nation-wide. At the top of the size spectrum, the only categories of firms reporting more than \$100 million in revenues all have 1,000 or more employees, a range in which Appendix Table E.2 reports only 162 firms nation-wide.

Table 3.3
Construction Firms, Nationwide,
by Number of Employees,
Average Firm Revenue
County Business Patterns 2008

(a)	(b)	(c)	(d)	(e)
Number of Employees	Industry Sector and NAICS Code			
	236	237	238	23
	Construction of Buildings	Heavy and Civil Engineering Construction	Specialty Trade Contractors	All Construction Firms
1-4	\$57,573	\$98,826	\$58,123	\$59,928
5-9	\$240,909	\$325,420	\$225,757	\$236,369
10-19	\$594,800	\$731,896	\$534,321	\$565,238
20-49	\$1,561,082	\$1,734,367	\$1,363,127	\$1,445,857
50-99	\$4,030,841	\$3,975,117	\$3,299,598	\$3,534,315
100-249	\$9,380,665	\$9,041,059	\$7,364,032	\$8,033,473
250-499	\$21,270,157	\$21,180,593	\$17,964,696	\$19,251,373
500-999	\$46,247,314	\$44,999,806	\$35,652,616	\$40,375,249
1,000 +	\$117,142,500	\$142,413,092	\$78,777,627	\$111,414,981
Overall Avg	\$336,465	\$1,198,189	\$400,162	\$430,554

While firms' revenues broadly correlate with their numbers of employees, the relationship tends to differ among sectors within construction. For example, the first row of Table 3.3 reports that, among firms with 1-4 employees, Constructors of Buildings and Specialty Trade Contractors each have average revenues of about \$58,000 per year, only about 58% as much as nearly \$99,000 reported for Heavy and Civil Engineering firms with the same number of employees. Presumably, this difference reflects the greater use of heavy, expensive equipment in the work of the latter firms than in the former -- the

² Table 3.3 is excerpted from Appendix Table E.4 in Appendix E.

difference between a carpenter doing building framing using a hammer and an equipment operator performing road building work with a bulldozer.³

The CBP data reported in Tables 3.1 through 3.3 include firms that are sole proprietorships -- that is, firms not legally organized as partnerships, for-profit “s” corporations, for-profit “c” corporations, or non-profit corporations. In construction, most firms organized as sole proprietorships are not very likely to seek federal contracts. Therefore, in Tables 3.4 - 3.6 and Appendix Tables E.5 - E.7, we repeat the analyses presented above excluding the more than 150,000 sole proprietorships previously included.

This change reduces the number of firms analyzed from the 773,614 noted at the bottom of Table 3.1 to the 623,332 referred to at the bottom of Table 3.4. The number of firms with fewer than five employees drops from the 65.1% reported in Table 3.1 to the 60.4% reported in Table 3.4. Average revenue per firm increases from the \$430,554 reported in Table 3.3 to the \$514,839 reported in Table 3.6. However, the overall patterns in the data discussed above remain essentially unchanged.

Table 3.4
Construction Firms, Nationwide,
Excluding Sole Proprietorships,
by Number of Employees,
County Business Patterns 2008

	(a)	(b)	(c)	(d)	(e)
Number of Employees	Industry Sector and NAICS Code				All Construction Firms
	236	237	238	23	
	Construction of Buildings	Heavy and Civil Engineering Construction	Specialty Trade Contractors		
1-4	68.6%	48.1%	57.7%		60.4%
5-9	15.6%	17.8%	18.5%		17.6%
10-19	8.6%	14.0%	12.1%		11.1%
20-49	5.0%	11.7%	7.9%		7.3%
50-99	1.4%	4.6%	2.4%		2.2%
100-249	0.6%	2.7%	1.1%		1.0%
250-499	0.1%	0.7%	0.2%		0.2%
500-999	0.0%	0.2%	0.1%		0.1%
1,000 +	0.0%	0.1%	0.0%		0.0%
Total %	100.0%	100.0%	100.0%		100.0%
Total Firms	191,073	42,852	389,407		623,332

³ Economics refers to these differences as differences in the capital intensity of the production process or the capital-labor ratio.

Table 3.5
Construction Firms, Nationwide,
Excluding Sole Proprietorships,
by Number of Employees,
Cumulative Percentage,
County Business Patterns 2008

(a)	(b)	(c)	(d)	(e)
Number of Employees	Industry Sector and NAICS Code			
	236	237	238	23
	Construction of Buildings	Heavy and Civil Engineering Construction	Specialty Trade Contractors	All Construction Firms
1-4	68.6%	48.1%	57.7%	60.4%
5-9	84.2%	65.9%	76.3%	78.0%
10-19	92.8%	79.9%	88.4%	89.1%
20-49	97.8%	91.6%	96.2%	96.4%
50-99	99.2%	96.2%	98.6%	98.6%
100-249	99.8%	98.9%	99.7%	99.7%
250-499	99.9%	99.6%	99.9%	99.9%
500-999	100.0%	99.9%	100.0%	100.0%
1,000 +	100.0%	100.0%	100.0%	100.0%

Table 3.6
Construction Firms, Nationwide,
Excluding Sole Proprietorships,
by Number of Employees,
Average Firm Revenue,
County Business Patterns 2008

(a)	(b)	(c)	(d)	(e)
Number of Employees	Industry Sector and NAICS Code			
	236	237	238	23
	Construction of Buildings	Heavy and Civil Engineering Construction	Specialty Trade Contractors	All Construction Firms
1-4	\$63,649	\$108,285	\$65,872	\$67,421
5-9	\$253,679	\$338,466	\$239,017	\$249,909
10-19	\$611,311	\$743,682	\$550,806	\$581,762
20-49	\$1,581,625	\$1,756,764	\$1,381,101	\$1,464,876
50-99	\$4,058,651	\$3,987,104	\$3,318,707	\$3,554,373
100-249	\$9,390,859	\$9,038,854	\$7,391,866	\$8,050,048
250-499	\$21,296,079	\$21,107,329	\$17,948,506	\$19,228,599
500-999	\$45,862,048	\$44,331,023	\$35,739,677	\$40,100,866
1,000 +	\$117,142,500	\$144,028,524	\$78,051,277	\$111,781,044
Overall Avg	\$394,066	\$1,310,206	\$486,574	\$514,839

Because sole proprietorships are not very likely to seek federal contracts, when CBP data are examined in the remainder of this chapter, we exclude sole proprietorships.

Firms Seeking Federal Contracts

Firms wishing to obtain contracts from the federal government must first register in the federal on-line Central Contract Registration (CCR). Table 3.7 describes the construction firms currently registered there. The table reports that 77,163 construction firms are entered in the CCR, 10.0% of the 773,614 construction firms reported in CBP for the entire industry.⁴

Table 3.7
Construction Firms, Nationwide,
by Number of Employees,
Federal Central Contract Register 2010

(a)	(b)	(c)	(d)
Number of Employees	Total Firms	%	Cumulative %
1-4	23,629	30.6%	30.6%
5-9	14,239	18.5%	49.1%
10-19	13,566	17.6%	66.7%
20-49	13,197	17.1%	83.8%
50-99	5,484	7.1%	90.9%
100-249	3,448	4.5%	95.3%
250-499	1,281	1.7%	97.0%
500-999	690	0.9%	97.9%
1,000 +	1,629	2.1%	100.0%
Total	77,163	100.0%	

Very small construction firms are much less prevalent among CCR construction registrants than among all firms in the construction industry. For example, in Table 3.4, firms with 1-4 employees accounted for 60.4% of all firms, but in Table 3.7, they are only 30.6%, approximately half the previous proportion. Conversely, large firms are substantially more prevalent among CCR registrants than in the construction industry as a

⁴ Table 3.7 excludes 17,903 CCR entries that we identified as probable duplicates because the firm name and state of incorporation were the same or the firm name, number of employees, and reported annual receipts were the same.

The CCR allows firms to list themselves in multiple industry sectors (NAICS codes) without designating any as its primary field of activity. Therefore, we cannot provide meaningful counts of CCR registrant firms by sectors within the construction industry.

whole. Firms with 100 or more employees accounted for 1.4% of firms in Table 3.4 but 9.1% of firms in Table 3.7.⁵

Table 3.8 reports average annual revenues (referred to in the CCR as “receipts”) for CCR-registered construction firms.⁶ Not surprisingly, the table reports that average annual receipts for these firms are considerably larger than for all firms in CBP (excluding sole proprietorships) presented in Table 3.6. For example, among firms with 20-49 employees, the firms in Table 3.6 average \$1.5 million in revenues, while those in Table 3.8 average \$7.4 million, about five times as much. In part, these differences reflect differences in the types of firms registering for federal contract work, especially the disproportionate number specializing in Civil and Heavy Engineering. However, other differences between CCR-registered firms and non-registered firm may also play a role, such as differences in use of subcontractors.

⁵ While the general patterns just described can be relied upon, some caution should be exercised in citing the specific numbers on which they are based. As footnote 4 noted, firms can list themselves in CCR under multiple NAICS codes, thereby creating multiple records in the CCR for a single firm. Although we attempted to eliminate firm records we judged to be duplicates, this process was undoubtedly imperfect.

Moreover, our efforts to address a different deficiency in CCR data were probably even less successful. The concern here is firms listed in the CCR under one or more construction NAICS codes and also under non-construction codes that represent a non-construction primary line of business. One example is Home Depot. As an employer with hundreds of thousands of employees, Home Depot would appear in the CCR counts in Table 3.7 as a construction firm because it offers some construction services. However, it would not be counted as a construction firm in CBP, which would classify it under its main activity of retailing. The count of large firms in the CCR is particularly vulnerable to this sort of over-inclusion. Therefore, for primarily-construction firms, the CBP count of 162 firms with 1,000 or more employees is likely to be more accurate than the 1,629 firms of that size in the CCR (see Table 3.14).

⁶ Table 3.8 reports average annual receipts per employee after eliminating the top and bottom 1% of these firms as outliers. We believe that eliminating the top 1% (above \$3 million per employee) primarily excludes holding companies, while eliminating the bottom 1% (below \$2,000 per employee) primarily eliminates firms with incompletely reported incomes.

Table 3.8
Construction Firms, Nationwide,
by Number of Employees,
Average Annual Receipts
Federal Central Contract Register 2010

(a)	(b)
Number of Employees	Average Annual Receipts
1-4	\$415,529
5-9	\$1,314,581
10-19	\$2,990,789
20-49	\$7,368,538
50-99	\$16,568,995
100-249	\$39,410,499
250-499	\$111,570,025
500-999	\$218,219,613
1,000 +	\$4,447,585,770
Overall Avg	\$102,791,678

Firms Currently Holding Federal Contracts

Only a subset of the firms registered in the CCR as interested in obtaining federal contracts hold such awards at any moment. Those that do appear in both the CCR and a second system, the Federal Procurement Data System (FPDS). Unfortunately, only holders of prime contracts are listed in this latter system, not subcontractors.

Tables 3.9 and 3.10 profile construction firms listed in FPDS in terms of their reported number of employees.⁷ These data refer to 2009, the most recent year currently available. The tables reveal continuation of the trend toward increasing firm size already evident by comparing Tables 3.1, 3.4, and 3.7. According to Table 3.9, firms with fewer than five employees account for only 22.6% of construction firms in the FPDS. Correspondingly, larger firms account for an increasing proportion. However, despite their increasing prominence, large firms remain in the minority. For instance, firms with 100 or more employees account for 14.1% of all construction firms in FPDS. This proportion is substantially greater than the 9.1% in CCR and 1.1% in CBP, but it still amounts to only one FPDS-listed construction firm in seven.

⁷ These tables are extracted from Appendix Tables E.8 and E.9 in Appendix E.

Table 3.9
Construction Firms, Nationwide,
by Number of Employees,
Federal Procurement Data System 2009

(a)	(b)	(c)	(d)	(e)
Number of Employees	Industry Sector and NAICS Code			
	236	237	238	23
	Construction of Buildings	Heavy and Civil Engineering Construction	Specialty Trade Contractors	All Construction Firms
1-4	18.1%	21.7%	24.8%	22.6%
5-9	14.9%	15.2%	17.2%	16.3%
10-19	18.2%	16.9%	17.7%	17.7%
20-49	21.2%	19.5%	19.8%	20.1%
50-99	10.3%	10.3%	8.7%	9.4%
100-249	7.5%	7.0%	5.2%	6.1%
250-499	3.3%	3.2%	2.0%	2.6%
500-999	1.7%	2.0%	1.2%	1.5%
1,000 +	4.6%	4.4%	3.4%	3.9%
Total %	100.0%	100.0%	100.0%	100.0%
Total Firms	3,515	2,954	8,210	14,679

Table 3.10
Construction Firms, Nationwide,
by Number of Employees,
Cumulative Percentage,
Federal Procurement Data System 2009

(a)	(b)	(c)	(d)	(e)
Number of Employees	Industry Sector and NAICS Code			
	236	237	238	23
	Construction of Buildings	Heavy and Civil Engineering Construction	Specialty Trade Contractors	All Construction Firms
1-4	18.1%	21.7%	24.8%	22.6%
5-9	33.1%	36.8%	42.0%	38.8%
10-19	51.3%	53.7%	59.7%	56.5%
20-49	72.5%	73.2%	79.5%	76.5%
50-99	82.8%	83.4%	88.2%	85.9%
100-249	90.4%	90.5%	93.4%	92.1%
250-499	93.7%	93.6%	95.4%	94.6%
500-999	95.4%	95.6%	96.6%	96.1%
1,000 +	100.0%	100.0%	100.0%	100.0%

Tables 3.9 and 3.10 also document differences in the size of FPDS-listed firms in different types of construction work. According to these tables, Specialty Trade Contractors tend to be smaller than Heavy and Civil Engineering Construction contractors. That pattern is the same as in Table 3.4 for CBP. However, in contrast to Table 3.4, Table 3.9 shows Specialty Trade contractors to be somewhat larger than Building Construction firms. This difference between CBP and FPDS may reflect the fact that relatively few federal contracts are for *residential* building construction, a principal activity under non-government funding for larger firms in the Construction of Buildings sector.

Table 3.11 reports firms' average annual revenues by employee size group.⁸ Here, patterns similar to those shown industry-wide in Table 3.6 are seen once again. These patterns include a correlation between firms' average revenues and their number of employees and differences among construction sectors in average revenues per employee. The table also reports higher average revenues among current federal contractors than among all construction firms and all CCR construction registrants. For instance, among firms with 100-249 employees, the average FPDS registrant in Table 3.11 had annual revenues of about \$42.1 million, compared to \$39.4 million for the average CCR registrant in Table 3.8 with the same number of employees.

Table 3.11
Construction Firms, Nationwide,
by Number of Employees,
Average Firm Revenue,
Federal Procurement Data System 2009

(a)	(b)	(c)	(d)	(e)
Number of Employees	Industry Sector and NAICS Code			
	236	237	238	23
	Construction of Buildings	Heavy and Civil Engineering Construction	Specialty Trade Contractors	All Construction Firms
1-4	\$764,441	\$491,664	\$435,371	\$509,495
5-9	\$2,020,793	\$1,457,641	\$1,272,580	\$1,471,960
10-19	\$3,867,061	\$3,338,816	\$2,722,563	\$3,123,793
20-49	\$9,626,684	\$7,137,627	\$5,659,514	\$6,953,476
50-99	\$19,464,428	\$17,246,262	\$12,805,163	\$15,531,950
100-249	\$66,204,160	\$37,222,832	\$29,567,046	\$42,143,419
250-499	\$159,939,149	\$108,329,676	\$88,538,558	\$115,704,075
500-999	\$405,958,093	\$245,396,053	\$212,754,181	\$276,081,344
1,000 +	\$3,001,223,571	\$5,627,930,099	\$7,671,725,922	\$5,895,732,317
Overall Avg	\$160,024,836	\$262,598,345	\$272,379,715	\$243,507,069

⁸ Appendix Tables E.10-E.14 in Appendix E provide more detailed revenue figures for FPDS firms. The same elimination of outliers described in footnote 6 was applied to FPDS data.

Where do Construction Employees Work?

So far, this chapter has analyzed the proportion of construction *firms* with different numbers of employees. We now turn to a related but different question: What proportion of construction *employees* work in firms of different sizes?

Data to answer this question are available in both the CCR and the FPDS, and, with some assumptions, can be constructed for CBP. However, these figures require important adjustments before they produce meaningful estimates.

As footnote 5 discussed using the example of Home Depot, for firms that engage in both construction and non-construction work, CCR and FPDS data do not distinguish revenues and employment related to construction from those in their other lines of business.⁹ This limitation probably does not distort revenue and employment figures substantially for smaller construction firms, since such firms tend to engage in construction as their sole product line. However, for the largest firms in the industry -- specifically, those reporting 1,000 or more employees -- it is likely to over-state their share of construction employment substantially.

An indication of the degree of over-statement is provided by the following comparison. If we take employment reported in the FPDS at face value, firms with 1,000 or more employees account for 94.8% of all construction employment. But 94.8% is a proportion out of 12.4 million total employees reported by FPDS construction contractors.¹⁰ Twelve million construction employees for firms holding federal construction contracts is not a plausible figure because the U.S. Bureau of Labor Statistics estimates employment for the entire construction industry, including both federal contractors and all other firms, at 7.2 million.¹¹

Because of these data limitations, we can reasonably estimate the proportion of workers at firms of different sizes only by adjusting the reported employment in large firms. We need to constrain the distorting effects of firms like Home Depot, whose listing in the FPDS reports 270,000 employees, the vast majority of whom work in retailing rather than construction (see footnote 5). Equally, we need to constrain the distorting effects of firms such as Skanska, which derives two-thirds of its construction revenues outside the United States.¹²

⁹ For purposes of this report, both CCR and FPDS data have two additional limitations. One is that employee counts may not be limited to work conducted in the United States. The other is that employment figures include administrative, professional, sales, and technical employees of these firms, not just on-site construction workers. Although both limitations tend to increase employee *numbers*, they are less likely to distort the *proportion* of employees at firms of different sizes, which is our primary focus.

¹⁰ These figures are computed in Appendix Tables E.15 and E.16 in Appendix E.

¹¹ US Bureau of Labor Statistics (2010A), p. 3. This figure excludes the self-employed.

¹² Skanska (2010).

To do so, we adjust FPDS data using two assumptions. First, we assume that in both the CCR and the FPDS, 162 firms fall into the 1,000+ size range, a figure computed in Appendix Table E.2 from CBP data for the construction industry as a whole. Second, we assume that in the FPDS, the average number of employees per firm in the 1,000+ category is 11,721, computed in Table 3.14 later in this chapter.¹³ Multiplied together, these assumptions produce an estimate that construction firms with 1,000 or more employees have 1,898,737 total employees. Combined with the approximately 650,000 employees reported in the FPDS for employers with fewer than 1,000 employees, that suggests that construction firms with federal contracts employ 2,554,713 workers, a figure not inconsistent with the estimated 7.2 million workers in the industry as a whole.

Tables 3.12 and 3.13 report the proportions of these 2.5 million workers in firms of different sizes. For firms with fewer than 1,000 employees, the figures in these tables are taken directly from Appendix Table E.16 in Appendix E. For firms with 1,000 or more employees, the figures incorporate the adjustments just discussed. But even after these adjustments, the predominant role of large firms in FPDS-reported construction employment is clear. According to these tables, among all construction firms in the FPDS, those with 1,000 or more employees employ 74.3% of all employees in firms currently holding federal contracts. The tables further report that firms with 100 or more employees employ 90.4% of all such workers, and firms with 50 or more employees employ 94.1%.

¹³ This 11,721 figure seems plausible, given the following employment numbers reported in the FPDS or other public sources for some of the largest construction firms: Bechtel: 48,000; Fluor: 35,000; Skanska: 32,000; Turner 29,000; Kellogg Brown & Root Services: 21,000; Kiewit, 17,000; Cushman and Wakefield: 12,000; and Parsons Infrastructure: 11,000. The remaining 162 construction firms with 1,000 or more employees typically have fewer employees than the well-known firms just listed.

Table 3.12
Construction Employees, Nationwide,
by Number of Employees,
Federal Procurement Data System 2009

(a)	(b)	(c)	(d)	(e)
Number of Employees	Industry Sector and NAICS Code			
	236	237	238	23
	Construction of Buildings	Heavy and Civil Engineering Construction	Specialty Trade Contractors	All Construction Firms
1-4	0.5%	0.2%	0.4%	0.3%
5-9	0.5%	0.4%	1.0%	0.6%
10-19	2.5%	1.0%	1.7%	1.4%
20-49	6.6%	2.6%	4.6%	3.6%
50-99	6.9%	3.0%	4.4%	3.6%
100-249	11.3%	4.4%	6.0%	5.2%
250-499	11.3%	4.8%	5.2%	5.0%
500-999	12.0%	6.2%	6.2%	5.9%
1,000 +	48.5%	77.3%	70.6%	74.3%
Total %	100.0%	100.0%	100.0%	100.0%
Total Employees	351,482	669,509	1,070,879	2,554,713

Table 3.13 (Ascending)
Construction Employees, Nationwide,
by Number of Employees,
Cumulative Percentage Ascending,
Federal Procurement Data System 2009

(a)	(b)	(c)	(d)	(e)
Number of Employees	Industry Sector and NAICS Code			
	236	237	238	23
	Construction of Buildings	Heavy and Civil Engineering Construction	Specialty Trade Contractors	All Construction Firms
1-4	0.5%	0.2%	0.4%	0.3%
5-9	1.0%	0.6%	1.3%	0.9%
10-19	3.4%	1.6%	3.1%	2.3%
20-49	10.0%	4.2%	7.7%	5.9%
50-99	16.9%	7.2%	12.1%	9.6%
100-249	28.2%	11.7%	18.1%	14.7%
250-499	39.5%	16.5%	23.3%	19.7%
500-999	51.5%	22.7%	29.4%	25.7%
1,000 +	100.0%	100.0%	100.0%	100.0%

**Table 3.13 (Descending)
Construction Employees, Nationwide,
by Number of Employees,
Cumulative Percentage Descending,
Federal Procurement Data System 2009**

(a)	(b)	(c)	(d)	(e)
Number of Employees	Industry Sector and NAICS Code			
	236	237	238	23
	Construction of Buildings	Heavy and Civil Engineering Construction	Specialty Trade Contractors	All Construction Firms
1-4	100.0%	100.0%	100.0%	100.0%
5-9	99.5%	99.8%	99.6%	99.7%
10-19	99.0%	99.4%	98.7%	99.1%
20-49	96.6%	98.4%	96.9%	97.7%
50-99	90.0%	95.8%	92.3%	94.1%
100-249	83.1%	92.8%	87.9%	90.4%
250-499	71.8%	88.3%	81.9%	85.3%
500-999	60.5%	83.5%	76.7%	80.3%
1,000 +	48.5%	77.3%	70.6%	74.3%

Tables 3.12 and 3.13 also report that these proportions vary somewhat among the three major subsectors of the construction industry. For example, firms with 1,000 or more employees account for only 48.5% of workers for Constructors of Buildings, compared to 77.3% of workers for Heavy and Civil Engineering firms. However, the general pattern of overwhelming dominance by larger firms applies to all three sectors.

In contrast to Tables 3.12 and 3.13 based on the FPDS, Table 3.14 analyzes firms in the CCR -- that is, all firms registering an interest in receiving federal contracts. Table 3.14 is based directly on CCR data except that, for the same reasons a parallel adjustment was made in Table 3.12, the number of firms with 1,000 or more employees is set to 162. This adjustment produces an estimate of total employees in construction firms in the CCR of 4.4 million, which falls reasonably between the 2.5 million employees in firms listed in FPDS and the 7.2 million employees in firms in the entire construction industry excluding sole proprietors.

As Tables 3.12 and 3.13 did for firms in the FPDS, Table 3.14 demonstrates that, among construction firms in the CCR, the majority of workers are employed at larger firms. However, the concentration of employees at these firms is less pronounced in the CCR than in the FPDS. According to Table 3.14, firms with more than 1,000 employees account for 43.3% of workers in CCR-listed firms; firms with 100 or more employees account for 75.2%; and firms with 50 or more employees account for 83.5%.

Table 3.14
Adjusted Construction Firms, Nationwide,
By Number of Employees,
Adjusted Average Employees per Firm,
Federal Central Contract Registration, 2010

(a)	(b)	(c)	(d)	(e)	(f)
Number of Employees	Total Firms	Total Employees	%	Cumulative %	Average Employees per Firm
1-4	23,629	55,563	1.3%	100.0%	2.4
5-9	14,239	92,439	2.1%	98.7%	6.5
10-19	13,566	177,630	4.1%	96.6%	13.1
20-49	13,197	395,872	9.0%	92.6%	30.0
50-99	5,484	366,388	8.4%	83.5%	66.8
100-249	3,448	507,737	11.6%	75.2%	147.3
250-499	1,281	430,342	9.8%	63.6%	335.9
500-999	690	460,463	10.5%	53.8%	667.3
1,000 +	162	1,898,737	43.3%	43.3%	11,720.6
Total	75,696	4,385,171	100.0%		57.9

In Table 3.15, average employees-per-firm figures from the CCR are used to create employee counts by employee size group in a still broader set of construction firms -- all firms reported in CBP excluding sole proprietorships. In this table, within each employee size group, the number of firms from the CBP is multiplied by the average employees per firm from the CCR to estimate employees for that size group.

Table 3.15 portrays a distribution of employment in the total construction industry much broader than that based on either the FPDS or the CCR. Larger firms are far less dominant, with firms of 1,000 or more employees now accounting for only 22.2% of all employment. In fact, three groups of firms with widely differing sizes each employ very roughly one-third of workers in the industry:

- firms with fewer than 20 employees -- 30.1%
- firms with 20 to 249 employees -- 39.0%
- firms with 250 or more employees -- 30.7%

Table 3.15
Construction Firms, Nationwide,
Excluding Sole Proprietorships, by Number of Employees,
Estimated Total Employees
County Business Patterns 2008

(a)	(b)	(c)	(d)	(e)	(f)
Number of Employees	Total Firms	CCR Average Employees per Firm	Total Estimated Employees	%	Cumulative %
1-4	376,504	2.4	885,340	10.6%	100.0%
5-9	109,685	6.5	712,070	8.6%	89.4%
10-19	69,447	13.1	909,323	10.9%	80.8%
20-49	45,300	30.0	1,358,870	16.3%	69.9%
50-99	13,949	66.8	931,938	11.2%	53.6%
100-249	6,523	147.3	960,548	11.5%	42.4%
250-499	1,400	335.9	470,319	5.6%	30.8%
500-999	366	667.3	244,246	2.9%	25.2%
1,000 +	158	11,720.6	1,851,858	22.2%	22.2%
Total	623,332	279.7	8,324,510	100.0%	

Using these Data to Analyze Coverage

In this section, we bring together counts of firms and counts of employees to examine issues of “coverage.” This term refers to the proportion of firms and workers affected by an employment requirement stated in terms of firm size -- for example, a requirement that EEO-1 reports must be filed by federal contractors with 50 or more employees. Typically, the higher the cutoff -- for example, if the EEO-1 reporting requirement applied to firms with 100 or more employees rather than 50 -- the fewer employees will be covered while the fewer firms will be required to comply. Conversely, the lower the cutoff -- for example, a requirement that EEO-1 reports be filed by federal contractors with 20 or more employees rather than 50 -- the more employees will be covered while the more firms will be required to comply.

Table 3.16 calculates coverage of firms and employees based on construction firms in the FPDS. According to this table:

- A requirement covering firms with 100 or more employees would encompass 90.4% of workers employed by federal construction contractors listed in the FPDS (2.31 million workers) while requiring compliance from 11.6% of such firms (1,652 companies).
- A requirement covering firms with 50 or more employees will encompass 94.1% of workers employed by federal construction contractors listed in the FPDS (2.40 million workers) while requiring compliance from 21.3% of such firms (3,032 companies).

- A requirement covering firms with 20 or more employees will encompass 97.7% of workers employed by federal construction contractors listed in the FPDS (2.49 million workers) while requiring compliance from 41.9% of such firms (5,976 companies).

Table 3.16
Construction Employees and Construction Firms,
Nationwide, by Number of Employees,
Cumulative Counts and Percentages,
Federal Procurement Data System 2009

(a)	(b)		(c)	(d)		(e)
Number of Employees	Employees			Firms		
	Cumulative Count	Cumulative Percent		Cumulative Count	Cumulative Percent	
1-4	2,554,713	100.0%		14,268	100.0%	
5-9	2,546,714	99.7%		10,954	76.8%	
10-19	2,530,714	99.1%		8,568	60.1%	
20-49	2,494,715	97.7%		5,976	41.9%	
50-99	2,402,719	94.1%		3,032	21.3%	
100-249	2,310,722	90.4%		1,652	11.6%	
250-499	2,178,727	85.3%		754	5.3%	
500-999	2,050,732	80.3%		378	2.6%	
1,000 +	1,898,737	74.3%		162	1.1%	

If the FPDS encompassed both prime contractors and their subcontractors, then Table 3.16 would provide a definitive measure of coverage. However, as noted earlier in this chapter, firms are included in the FPDS database only when they hold a prime contract, and as noted in Chapter 2, many construction firms operate only as subcontractors, especially with respect to projects as large as many federal construction projects. An analysis of coverage is needed that adjusts Table 3.16 to take account of coverage of subcontractor employees.

Estimating the number of “subcontractor only” firms and their employees is a challenge because no database provides the data required for an exact analysis. If every firm in the construction industry were involved in federal contracting, either as a prime contractor or a subcontractor, then industry-wide data from CBP could be used. However, most firms in the construction industry, especially smaller ones, are *not* federal contractors, either as prime contractors or subcontractors.

Compared to under-inclusive FPDS data and over-inclusive CBP data, the CCR offers a relatively attractive alternative. According to Table 3.17, construction firms listed in the CCR employ approximately 4.4 million workers. Thus, to the 2.5 million employees in construction firms in the FPDS, the CCR adds an additional 1.9 million workers who might be assumed to be employed by holders of federal subcontracts but not prime contracts.

The strongest argument for using the CCR to represent federal contractors and subcontractors is that it is explicitly designed as a place for potential federal contractors to register. Thus, firms listed there have self-identified themselves as both interested in, and capable of, federal work. The only federal subcontractors likely to be missing from CCR-registered firms should be firms seeking federal subcontracts that would *never* consider pursuing federal prime contracts.

Counter-balancing the potential under-count of firms discussed in the previous paragraph, firms listed in the CCR and not in the FPDS may over-count federal subcontractors by including firms that express interest in federal contracts but are not capable of winning any or performing if they did win. Some firms such as this are undoubtedly found among the 77,000 construction registrants in the CCR. However, to the extent that they are relatively few or relatively small, they would not distort employee counts substantially. Moreover, since the CCR is subject to both over-inclusion and under-inclusion, potential errors should at least partially offset each other.¹⁴

Based on the above rationales for assuming that the CCR provides a reasonable count of federal construction contractors plus subcontractors, Table 3.17 reports the coverage of firms and employees estimated from that source. According to that table:¹⁵

- A requirement covering firms with 100 or more employees would encompass 75.2% of employees of federal construction contractors, prime and subs (3.3 million workers) while requiring compliance from 7.4% of those firms (5,581 companies).

¹⁴ Some evidence suggesting that the result is a reasonably accurate estimate is provided by the following comparison. Suppose that all potential federal subcontractors that are never prime contractors are in the Specialty Trades subsector of the industry, are not sole proprietors, and have fewer than 1,000 employees. According to CBP data in Table E.5 in Appendix E, such firms have about 4.7 million total employees. Therefore, an estimate that 1.9 million employees work for firms that are federal subcontractors but never federal prime contractors implies that about 40% of such “potential” federal subcontractors are federal subcontractors, while 60% are not. Although no comparison data is available to which these figures can be directly compared, these proportions seem plausible.

¹⁵ The number of firms presented in Table 3.17 and the “bullet” paragraphs that surround the table include both prime contractors and their subcontractors, thereby treating both types of firm as being involved in meeting a federal requirement. However, if a requirement were imposed only on prime contractors who then bore responsibility for compliance for both themselves and their subcontractors, then the number of firms required to comply with the requirement would be smaller than those stated in the table and these paragraphs. In fact, it would be the numbers in Columns (d) and (e) of Table 3.16 rather than the counterpart columns in Table 3.17. This difference would not change the number of workers covered, which in either case should be those reported in Columns (b) and (c) of Table 3.17.

Table 3.17
Construction Employees and Construction Firms,
Nationwide, by Number of Employees,
Adjusted Cumulative Counts and Percentages,
Federal Central Contract Registration, 2010

(a)	(b)	(c)	(d)	(e)
Number of Employees	Employees		Firms	
	Cumulative Count	Cumulative Percent	Cumulative Count	Cumulative Percent
1 – 4	4,385,171	100.0%	75,696	100.0%
5 – 9	4,329,608	98.7%	52,067	68.8%
10 – 19	4,237,169	96.6%	37,828	50.0%
20 – 49	4,059,539	92.6%	24,262	32.1%
50 – 99	3,663,667	83.5%	11,065	14.6%
100 – 149	3,297,279	75.2%	5,581	7.4%
150 – 249	3,078,331	70.2%	4,094	5.4%
250 – 499	2,789,542	63.6%	2,133	2.8%
500 – 999	2,359,200	53.8%	852	1.1%
1,000 +	1,898,737	43.3%	162	0.2%

- A requirement covering firms with 150 or more employees would encompass 70.2% of employees of federal construction contractors, prime and subs (3.1 million workers) while requiring compliance from 5.4% of those firms (4,094 companies).
- A requirement covering firms with 250 or more employees would encompass 63.6% of employees of federal construction contractors, prime and subs (2.8 million workers) while requiring compliance from 2.8% of those firms (2,133 companies).

It is not possible to determine how close these CCR-based estimates are to the precise number of federal construction prime contractors and subcontractors, nor whether they over-estimate or under-estimate the number. However, these figures from Table 3.17 represent the best estimates that can be provided with available data.

Chapter 4

Utilization of Women

This chapter first estimates the extent to which women are under-represented in on-site construction occupations in the construction industry. It then discusses attitudes and employment practices in the industry underlying that under-representation.

Numerical Estimates

Throughout this report, the terms “under-utilization” or “shortfall” are used synonymously to refer to the presence of fewer women in an occupation than would be expected given their availability.¹ Three well-established databases can be used to estimate the availability and utilization of women, from which under-utilization can be computed.²

Census 2000

The first database is the “EEO Special Tabulation” (also referred to as the “EEO Data Tool”) provided by the U.S. Census Bureau under contract with OFCCP and three other federal agencies. The most recent version currently available is based on the 2000 Census.³

This source provides data on the utilization of women in 27 on-site construction occupations, together employing 4.9 million workers nation-wide in 2000. Table 4.1 reports data from this source for the 10 largest of these occupations, as well as the sum of all 27; the ten occupations reported in the table accounted for about 89% of all on-site construction employment in the construction industry at that time.

¹ See US OFCCP (2009B). However, in this report, the term “under-utilization” does not correspond in all details to the definition in that source. Specifically, in this report, it refers to situations in which the rate of employment of a demographic group is less the expected representation and does not reserve that term to situations where that under-representation in employment has been determined to be “statistically significant” using computational procedures set forth in that OFCCP document.

² In Chapter 6, under-utilization calculated in Chapters 4 and Chapter 5 will be cited to justify replacing the availability figures cited in these two chapters with those calculated with a new methodology. However, to cite under-utilization calculated with the new methodology to justify the new methodology would be circular reasoning. Therefore, Chapters 4 and 5 discuss only estimates derived using well-established, more traditional methodology.

³ The database is available at <http://www.census.gov/hhes/www/eeoindex/eeoindex.html>.

Table 4.1 ⁴
Female Utilization in On-Site Construction
Occupations in the Construction Industry,
2000 Census EEO Special Tabulation

(a)	(b)	(c)	(d)
Occupation	Construction Industry	All Other Industries	Under-Utilization
Carpenters	1.5%	3.8%	- 2.2%
Laborers	3.2%	4.7%	- 1.5%
Electricians	2.0%	3.3%	- 1.4%
Painters	6.8%	9.7%	- 3.0%
Pipelayers & plumbers	1.5%	2.3%	- 0.8%
Equipment operators	1.9%	2.2%	- 0.3%
Roofers	1.5%	3.6%	- 2.1%
Brick & stone masons	1.0%	3.8%	- 2.9%
Drywall installers	2.5%	6.5%	- 4.0%
Floor installers	2.2%	3.1%	- 0.9%
27 occupations	2.6%	4.7%	- 2.0%

Column (b) of the table reports that actual utilization of women in on-site construction occupations in the construction industry averaged 2.6% and ranged as low as 1.0%.⁵ Column (c) then provides comparison figures for these *same* occupations *outside* the construction industry. These latter figures average 4.7% and are never lower than 1.7%.

It is reasonable to assume that the job requirements and working conditions within an occupation, although not identical, are largely similar between the construction industry and other industries where women practice the same trades. In that circumstance, it is reasonable to treat Column (c) as a benchmark measure of expected representation for women's employment in construction, also sometimes referred to as a "standard of availability."

Applying this benchmark, Column (d) of Table 4.1 states the difference between Columns (c) and Column (b). It reports that women are substantially under-utilized throughout the construction industry. Women are under-utilized in 26 (96.3%) of the 27

⁴ Table 4.1 is extracted from Appendix Table A.1 in Appendix B.

⁵ Other researchers have produced estimates similar to these figures. For example, according to one study, the representation of women in the construction trades ranged between 1.9% in 1983 and 2.4% in 2002. See DRC & ERA (2004).

occupations analyzed.⁶ For the 27 on-site construction occupations combined, the shortfall is 2.0%, a figure more than three-quarters as large as the actual utilization of 2.6%. When the 2.0% shortfall rate is applied to the 4.9 million workers in the construction industry in 2000, the shortfall totals 100,597 “missing” women construction workers.⁷

American Community Survey

The second data source from which under-utilization can be analyzed is the American Community Survey conducted in 2006-2008 (ACS 2006-2008). The ACS is a new data collection system first implemented by the U.S. Census Bureau in 2005 to replace the former practice of collecting detailed social and economic “long form” data in the decennial Census.⁸ The Census Bureau intends eventually to issue a new EEO Special Tabulation based on ACS data collected over the five years 2006-2010. However, that release is currently not expected to occur until 2012. For the meantime, using ACS data over the three years 2006-2008 which the Census Bureau has released, we created an “interim” ACS-based update parallel to that in the EEO Special Tabulation based on the 2000 Census.

Table 4.2 presents a utilization analysis parallel to that in Table 4.1 but based on these more recent data. It shows women constituting 3.0% of workers in on-site construction occupations in the construction industry, 0.4% higher than the 2.6% in 2000. However, the utilization of women in construction occupations in industries other than construction rose even more over the same period, from 4.5% to 5.4%. Accordingly, the under-utilization of women in the construction industry increased between 2000 and 2006-2008, from the 2.0% reported in Table 4.1 to 2.5%.

Women are under-utilized in 24 (88.9%) of the 27 occupations analyzed in Table 4.2.⁹ The overall under-utilization shown in the table -- 2.5% -- is 83% as large as the 3.0% actual utilization reported there. When the 2.5% shortfall rate is applied to the average of 8.5 million workers in the construction industry in 2006-2008,¹⁰ the shortfall totals 210,611 “missing” women construction workers in the industry.¹¹

⁶ The exception is Paperhangers, where women are utilized at a higher rate in the construction industry than in other industries. This occupation accounts for 0.3% of on-site construction workers in the industry.

⁷ See the bottom row of Column (p) of Appendix Table A.1.

⁸ The ACS is described at <http://www.census.gov/acs/www/index.html>.

⁹ The exceptions are Cement masons, Paperhangers, and Boilermakers. Together, these three occupations account for 1.5% of on-site construction workers in the construction industry.

¹⁰ This figure includes self-employed individuals as well as wage and salary employees.

¹¹ See the bottom row of Column (p) of Appendix Table B.1.

Table 4.2 ¹²
Female Utilization in On-site Construction
Occupations in the Construction Industry,
American Community Survey 2006-2008

(a)	(b)	(c)	(d)
Occupation	Construction Industry	All Other Industries	Under-Utilization
Laborers	3.6%	6.0%	- 2.5%
Carpenters	1.7%	4.3%	- 2.6%
First level supervisors	3.1%	4.0%	- 0.9%
Painters	8.0%	11.7%	- 3.6%
Electricians	1.8%	4.1%	- 2.3%
Pipelayers & plumbers	1.5%	2.5%	- 1.0%
Equipment operators	2.1%	4.0%	- 1.9%
Roofers	1.5%	3.4%	- 1.9%
Brick & stone masons	1.0%	2.6%	- 1.6%
Drywall installers	2.8%	5.6%	- 2.9%
27 occupations	3.0%	5.4%	- 2.5%

ACS data can also be used to examine a more detailed pattern in the employment utilization of women -- the so-called “glass ceiling” effect. As Chapter 2 discussed, traditional career paths in the construction trades often have workers first employed as laborers or helpers and then, after acquiring skills through some combination of formal training and on-the-job experience, move to more skilled, better paid occupations. In formal apprenticeships, this progression is typically from officially-identified apprentices to journeymen to master craft workers, but the same progression applies even when skill development is less formally structured. A “glass ceiling” is present when some demographic groups (for example, men) follow this progression at a higher rate than other groups (for example, women), with the latter group disproportionately remaining in entry-level positions.

The most rigorous way to test for glass ceilings involves identifying a cohort of men and women with similar backgrounds and abilities who start work together and tracing their career paths over subsequent years. Such analysis is beyond the scope of this study. However, a simpler analysis provides an alternative indication of the same patterns. This analysis compares the representation of women and men at different levels in the “hierarchy” of occupations; a glass ceiling is signaled by a falling proportion of women at successively higher occupational levels.

Table 4.3 presents such an analysis for 25 on-site construction occupations where earnings data are readily available as a measure of occupational status. The table divides

¹² Table 4.2 is extracted from Appendix Table B.1 in Appendix B.

these occupations into three groups: the ten construction crafts with the highest average earnings, averaging more than \$40,000 per year; 13 occupations generating an intermediate level of earnings, averaging between \$30,000 and \$40,000 per year; and the entry level occupations of laborers and helpers, paying between \$25,000 and \$30,000 per year. According to the table, women account for 1.8% of the best-paid occupations, less than half their 3.8% representation in the entry-level occupations. Similarly, women account for 2.4% of the “intermediate-level” occupations, less than two-thirds their representation in the entry-level occupations. This pattern is consistent with the “glass ceiling.” Thus, while relatively few women are found in any construction occupations, they are even rarer in “higher level” positions and disproportionately concentrated at the entry level.

Table 4.3¹³
Representation of Women in Construction Occupations
Grouped by Earnings, ACS 2006-2008

(a)	(b)	(c)	(d)
Category	Examples	Annual Earnings	% Women
10 best-paid occupations	Electricians Plumbers	\$40,000 - \$80,000	1.8%
13 intermediate-level occupations	Drywall installers Equipment operators	\$30,000 - \$40,000	2.4%
2 entry-level occupations	Laborers Helpers	\$25,000 - \$30,000	3.8%

EEO-1 Data

A third source of data is EEO-1 reports collected annually by the U.S. Equal Employment Opportunity Commission from all private sector employers with 100 or more employees (50 employees for federal contractors).¹⁴

Compared to the previous two sources, EEO-1 data have the disadvantage of not including employees of smaller firms. They also have the limitation of reporting not individual occupations but rather three broader groups -- skilled craft workers, semi-skilled operatives, and unskilled laborers. However, they have the advantage of

¹³ Table 4.3 is excerpted from Appendix Table B.9 in Appendix B.

¹⁴ US Equal Employment Opportunity Commission (201); US Equal Employment Opportunity Commission (2006); Bendick (2000).

providing data for sub-sectors of the industry, allowing separate analyses of the three sectors described in Chapter 2 -- Construction of Buildings, Civil and Heavy Construction, and Specialty Trade Contractors.

The most recent publicly-released EEO-1 data are for 2008, and these are summarized in Table 4.4. According to Column (c) of this table, in that year, women industry-wide account for 1.8% of workers in skilled construction crafts, 3.4% of semi-skilled operatives, and 4.3% of laborers. These figures are consistent with the previous two data sources in reporting that women constitute only a small proportion of on-site construction workers in the industry.

Table 4.4 ¹⁵
Female Utilization in Selected Occupations in the Construction Industry in 2008, EEO-1 Reports

(a)	(b)	(c)	(d)	(e)
Occupational Group	Construction Sector	Actual Women	Expected Women	Under-Utilization
Skilled craft workers	All construction	1.8%	8.6%	- 6.8%
	Construction of buildings	1.8%		- 6.8%
	Heavy construction	2.3%		- 6.3%
	Specialty trades	1.6%		-7.0%
Semi-skilled operatives	All construction	3.4%	25.6%	-22.2%
	Construction of buildings	5.3%		-20.3%
	Heavy construction	3.6%		-22.0%
	Specialty trades	2.6%		-23.0%
Unskilled laborers	All construction	4.3%	32.7%	-28.4%
	Construction of buildings	3.9%		-28.8%
	Heavy construction	6.2%		-26.5%
	Specialty trades	3.2%		-29.4%

In Table 4.4's Column (d), the expected representation of women is based on the same three broad occupational groups -- skilled craft workers, semi-skilled operatives, and unskilled laborers -- in five "blue collar" industries other than construction: agriculture, forestry, and fishing; mining; manufacturing; transportation; and warehousing. As in construction, craft, operative, and laborer positions in these industries typically require physical strength and may involve uncomfortable or hazardous working conditions. They also typically place craft workers, operatives, and laborers in a "blue collar atmosphere" rather than, for example, the typically cleaner, calmer, more comfortable conditions of office work. However, as a later section of this

¹⁵ Table 4.4 is extracted from Appendix Table C.1 in Appendix C.

chapter will discuss, they do not share the worksite culture or daily workplace practices or institutions of the construction industry itself.

In parallel to Tables 4.1 and 4.2, Table 4.4, reports that women are consistently under-represented in construction industry employment compared to their representation in these other “blue collar” industries.¹⁶ Despite the sometimes “rough and tumble” environment and physical demands of the industries examined, women account for as much as 32.6% of craft, operative, and laborer employees in these comparison industries, in sharp contrast to counterpart figures for women in construction which vary between 1.6% and 6.2%.

According to Table 4.4, under-utilization of women is universal across the three construction subsectors for which separate data are available. For example, in the heavy construction sector, the under-utilization is 6.3% among skilled craft workers, 22.0% among semi-skilled operatives, and 26.5% in unskilled laborers.

Shortfalls are also universal among the three types of on-site type construction positions examined. For all constructions sectors combined, women are short 6.8% among craft workers, 22.2% of semiskilled operatives, and 28.4% of unskilled laborers. Moreover, Column (c) of Table 4.4 reports consistently decreasing representation of women with increasing skill levels of the occupation; for all construction combined, the representation of women falls from 4.3% among unskilled laborers to 3.4% among semi-skilled operatives and then to 1.8% among skilled craft workers. This pattern is consistent with the “glass ceiling” observed in ACS 2006-2008 data.

According to Appendix Table C.1 in Appendix C, the number of “missing” women construction workers totals 153,725, which is the sum of 42,931 “missing” skilled craft workers, 36,730 “missing” semi-skilled operatives, and 74,064 “missing” unskilled laborers. These figures are consistent with the 210,611 shortfall estimated using ACS 2006-2008 in the same time period, since the ACS figures are based on all construction employers, while the EEO-1 figures encompass only firms large enough to file EEO-1 reports.

Rates of Change

Because EEO-1 reports have been collected in a generally consistent format since the mid-1970s, this data set can document employment changes over nearly 35 years. Table 4.5 reports EEO-1 data on the shortfall between expected and actual representation for all construction between 1975 and 2008. It shows that under-utilization of women

¹⁶ According to Appendix Table B.1, ACS 2006-2008 reports 8,529,387 persons employed in on-site construction occupations. According to Appendix Table C.1, the comparable figure for on-site construction employees in EEO-1 reports (adding together craft workers, operatives, and laborers) total 1,057,927. The latter figure is 12.4% of the former. Dividing the 50,213 shortfall calculated from EEO-1 data by the 388,000 shortfall estimated from ACS 2006-2008 yields a figure of 12.9%. The similarity of 12.4% and 12.9% calculated from two unrelated data sets enhances the credibility of these estimates.

either has remained essentially unchanged over that period or has increased. To summarize this lack of change, we can use the average annual rates of change in the bottom row of Table 4.5 to project an expected date by which, at the rate of change observed on the past 33 years, under-utilization of women will be eliminated. Since over this period, the under-utilization for craft workers and laborers has increased rather than decreased, the expected date at which shortfall will disappear is “never.” For operatives, the rate of closure of two one-hundredths of one percent implies that the 27.6% under-utilization observed in 2008 will require more than 1,000 years to be eliminated.

Table 4.5 ¹⁷
Shortfall of Women in Selected Occupations in the Construction Industry, 1975-2008, EEO-1 Reports

Year	Skilled Craft Workers	Semi-skilled Operatives	Unskilled Laborers
1975	- 6.1%	- 28.4%	- 29.9%
1980	- 8.1%	- 26.7%	- 30.7%
1985	- 7.5%	- 26.6%	- 29.0%
1990	- 7.3%	- 26.9%	- 23.9%
1995	- 7.5%	- 26.6%	- 28.6%
2000	- 8.8%	- 24.9%	- 29.1%
2008	- 9.8%	- 27.6%	- 31.4%
Average annual rate of change	- 0.11%	+ .02 %	- .05%

This pattern of little or no decrease in under-utilization over time is confirmed by comparing the shortfall in Census data for 2000 in Table 4.1 to that in 2006-2008 reported in Table 4.2. Taking the figures in the bottom row of these tables for all 27 construction occupations together, we see that over the approximately seven years between 2000 and 2006-2008, utilization of women increased from 2.6% to 3.0%, a rate of increase of about six one-hundredth of one percentage point a year. At that rate, the utilization of women in construction crafts will reach the level expected today in about 250 years, while that expected today in craft and laborer positions will be achieved in about 750 years.

Summary of Numerical Estimates

In this chapter, we have analyzed data from three data sources that differ in a number of ways:

- Time periods (2000, 2006-2008, and 2008);

¹⁷ Table 4.4 is extracted from Appendix Table C.6 in Appendix C.

- Coverage (all construction workers, those employed by larger firms);
- Categorization (separate occupations, occupational groups, industry subsectors); and
- Comparison benchmarks (all other industries, “blue collar” industries).

Despite these differences, there is clear consensus among all these analyses on five key points:

1. Women are substantially under-represented among on-site construction workers in the construction industry compared to standard measures of their expected representation.
2. This under-representation corresponds to a large number of “missing” women construction workers in the industry. The most recent complete data -- from the ACS 2006-2008 -- estimate this number at 210,611 women.
3. The under-utilization is not limited to subsets in the industry but is widespread, and in many ways essentially universal.
4. In a classic “glass ceiling” pattern, this under-utilization is greater for higher-level construction occupations than for entry-level ones. And
5. The under-utilization does not appear to be diminishing significantly over time, and may even be increasing.

In the remainder of this chapter, we draw upon a range of scholarly research to interpret the causes of these employment outcomes.

Attitudes and Practices Underlying these Outcomes

In Chapter 2, we examined how the economic logic of the construction industry works against rapid evolution of employment practices. We saw how the industry’s dependence on short term projects, as well as other economic and operational considerations, limited incentives for, and opportunities for, change. In those circumstances, continued under-utilization of women in the construction trades is perhaps not unexpected.

However, under-utilization of women is not simply another instance of resistance to innovations throughout “the industry that time forgot.” It is also rooted in the individual psychology and organizational dynamics of prejudice and discrimination that scholarly research over several decades has documented to be broadly shared, deeply rooted, and frequently expressed in construction workplaces today. Manifested in daily

work life, these attitudes and practices underlie the under-representation documented in this chapter.

The Dominant Workplace Culture in Construction

Discussion of these attitudes and practices should begin with the concept of workplace culture. Formally defined, a workplace culture is the set of attitudes, norms, and values common to the persons and organizations in a workplace. Less formally, it is simply “the way things are done around here.”¹⁸

Workplace cultures vary along a continuum which at one end may promote equal employment opportunity, workplace fairness, and employee inclusion, or at the other end, sustain the opposite. The dominant workplace culture in the construction industry falls clearly into the latter category. In the words of one researcher:¹⁹

The single largest contributor to women leaving the construction industry -- and women failing to choose construction as a viable career -- was the culture.

Other researchers have portrayed this circumstance using the words of construction women themselves. The following examples are from a study published in 2010:²⁰

- “Despite the gains, the battle for complete acceptance is for many ongoing. Not a week goes by without someone asking Rosana Privitera Biondo, president of Mark One Electric Co, Inc. why one of her three brothers, who serve as vice presidents, is not in charge.”
- “I went to one meeting of the ASA (American Subcontractors Association) and when we walked in, those men expected us to run the bake sale,” said Robin Fulton Meyer, president of The National Association of Women in Construction (NAWIC).
- “Sometimes I feel like I’ve really made it,” says Kern, who is President of the Women Construction Owners & Executives USA (WCOE). “You forget about it and then something happens and it’s a shock to the system, God, I thought I was over that.”

Researchers have also documented the influence of this culture using recent developments in the state of California. During the 1980s, state law mandated affirmative action for state contractors, including construction firms. Researchers

¹⁸ Bendick, Egan & Lofhjelm (2001).

¹⁹ Menches, et al. (2007), p. 703.

²⁰ Gerth (2010), pp. 1-2.

concluded that these requirements increased job opportunities for women in construction, especially where there was added judicial, advocacy, or community pressure to set and enforce hiring goals.²¹ Between 1990 and 1996, the percentage of women employed in the California construction industry rose 26%.²²

In 1996, California voters passed Proposition 209 eliminating affirmative requirements in state contracts. This change “put a virtual stop to the slow progress women were making into traditionally male occupations, such as carpentry, electrical work and plumbing.” In California, the proportion of women among construction workers dropped 33% between 1996 and 2001, through substantial increases in male employees while the number of women ceased growing. In addition, between 1994 and 2003, the number of women in apprenticeship programs in California decreased by 41%.²³ Based on interviews with actors in the construction industry, researchers attributed these numerical reverses to:²⁴

- apathy towards diversifying the workforce;
- barriers to breaking into the “old boy’s network” to learn about job opportunities; and
- attitudes that women do not belong in the trades.

Ironically, resistance to hiring women has persisted even in the face of substantial long-term shortages of skilled construction workers. For example, the U.S. Department of Labor’s Employment and Training Administration (ETA) has projected that an additional one million workers will be needed in the construction industry during 2002-2012,²⁵ while the Construction Users Roundtable (CURT) found nearly 50% of the major construction trades to be experiencing a critical shortage of workers.²⁶ However, in these analyses, women and minorities are discussed primarily in terms of the inability of the industry to attract women and minorities rather than as sources of ready talent to address these shortages.²⁷

²¹ Price (2002), p. 106. See also Holzer & Neumark (2000).

²² DRC (2004), p. 1. Here, employee counts included clerical and janitorial employees along with construction craft workers and laborers.

²³ DRC (2004), p.18.

²⁴ DRC (2004), p. 35.

²⁵ US ETA (2004).

²⁶ CURT (2006).

²⁷ Construction Industry Institute (2003).

Negative Stereotypes

The studies just discussed suggest a dominant attitude that women simply do not belong in construction. As one researcher put it, “*what* a woman does for a living is less important than *where* she does her job.”²⁸ If the “where” is anywhere in the construction trades, then the woman is seen as out of bounds.

According to research, such attitudes are likely to characterize any occupation that has long been dominantly or exclusively male because such a history creates a culture that is an extension of “male culture.” The pattern is also likely to be seen when workplaces are currently numerically dominated by men because that circumstance “heightens the visibility of, and hostility toward, women workers who are perceived as violating male territory.”²⁹ The construction industry is characterized by *both* these circumstances predisposing industries to resistance.

Expressions of this resistance commonly incorporate some or all of three themes.

The first of these themes is stereotypes about women’s ability to perform construction work. A stereotype is a generalized belief about a group of individuals that is incorrectly applied to judging individuals within that group.³⁰ Thus, for example, the *correct* statement that the average woman is less strong than the average man can be *incorrectly* applied to presume that any woman is not sufficiently strong to meet the requirements of any construction job. Negative stereotypes commonly cited to justify not hiring women in construction hold that all women lack the competence, physical strength and stamina, or sustained commitment to do the work.³¹

Such stereotypes operate with particular force in the construction industry because of the operational circumstances and pressures described in Chapter 2. Why would a contractor risk raising costs through shoddy work or risk upsetting a project’s complex task sequence by hiring workers stereotypically perceived to be unpredictable and incompetent? To do so would work against the contractors’ primary objectives -- to get the project completed on time, on budget, and to the satisfaction of the project owner. For example, in electrical contracting work studied by one researcher:³²

²⁸ Gruber (1998), p. 303. See also LaFontaine & Tredeau (1986) and Loy & Stewart (1984).

²⁹ Gruber (1998), p. 303. For parallel experiences in other male-dominated “blue collar” fields such as firefighting, policing and mining, see Hulett et al.(2008), Scarborough (2002), Hagan (2002), and Scripps (2006). On women’s employment experiences in “non-traditional” occupations more generally, see Kanter (1977), Leidner (1993), Pierce (1995), and Fonow (2003).

³⁰ Gilovich, Keltner & Nisbett (2006), p. G8.

³¹ Paap (2008), Chun et al. (2009).

³² Moccio (2009), p. 101.

By all accounts, ...the greatest opposition to women on the job site comes from small contractors. These employers focus on getting the job finished on time. Hostage to the high cost of loans and materials, they demand a high rate of productivity. They believe that women are less skilled....They expect that women may have to take time off to care for a sick child, or may become pregnant, or need time off during their periods. They fear that women are just not up to the job.

To some extent, these negative assumptions are specific to women. However, negative attitudes about women's abilities to perform construction work are often reinforced by stereotypes that the only reason women are hired is affirmative action, and *any* employee brought in through affirmative action -- minorities, women, persons with disabilities, or anyone else -- is an inferior employee.³³ This sentiment was typically illustrated at a meeting in 2003 at which affirmative action goals were being set for the Denver Parks and Recreation Department. In this meeting, a department employee stated that "the [affirmative action] goals were zero because we want this done right....This is a complicated project and we want it done right....we can't have mistakes....so we can't have any goals on this."³⁴

A second theme is that the presence of women on a construction site creates sexual tension that interferes with productivity. Employers may consider women a disruptive force site because of the 'flirtation factor,'³⁵ distracting their male co-workers from working efficiently and safely. In addition, women are sometimes accused of trading sexual favors to male bosses for plum job assignments, promotions and overtime.³⁶

A third theme commonly used to support excluding women from construction employment is that women do not really want construction jobs but instead want "women's" jobs. One researcher found that the male construction workers believed that women "aren't really construction workers; they're just working construction to find a man, to prove a point, or to set up the average working man for an unfair harassment lawsuit."³⁷ This stereotype also implies that women will be unreliable employees because they are not seriously committed to construction work, and it is not worthwhile to train them for skilled positions because they will leave their construction careers when they get married or pregnant.

³³ Paap (2006), pp. 61-64.

³⁴ NERA (2006), p. 206.

³⁵ Moccio (2009), p. 101.

³⁶ Moccio (2009), p. 162.

³⁷ Paap (2006), p. 79.

Some researchers focus on such stereotypes as a problem in themselves, the reasons women are excluded. Other researchers consider these stereotypes more as justifications cited by managers, supervisors and co-workers whose motivation for exclusion is more fundamental. In this latter interpretation, male employees exclude women from construction employment to maintain “social closure” -- that is, to preserve their “in-group” privilege and social comfort -- against any “out-groups” seeking their well-paid jobs.³⁸ In that circumstance, although stereotypes might be cited to justify exclusion of women, the stereotypes are only a means to a more fundamental end -- defending against a threat to the long-standing privilege of the dominant in-group.

This dynamic is most transparent when not employing women in construction is justified because women are “taking jobs that men deserve.” As Chapter 2 discussed, the construction industry offers opportunities for individuals with little or no post-secondary education to command middle class earnings. These opportunities have long been valued, and they are increasingly so as such opportunities continue to shrink in the American labor market. Women are unwelcome competition for employment opportunities that “insiders” feel should be theirs.³⁹ This way of thinking is sometimes expressed as reserving these positions for men who have families to support.

A variant on the same theme arises because of the common tradition in the construction industry of passing job opportunities and job knowledge from fathers to sons or nephews. As one researcher summarized the process, “Family ties and long-standing tradition remains strong in the trades, and the gateway to entry is patrolled by insiders who are suspicious of change”⁴⁰ This tradition has long played a pivotal role in maintaining the clustering of certain gender and race groups within various trades, forming “occupational niches.”⁴¹ In being seen as a disruption to these traditions, employment of women is sometimes seen in even more emotionally-laden terms than simply competition for jobs. They are seen to threaten family values and traditions.

A somewhat more subtle version of the same psychological dynamic focuses on male employees rejecting women because women doing the same jobs they are threatens their masculinity. Simply put, women’s presence is seen as devaluing men’s work. Construction is “a man’s job,” and some men in construction have negative reactions to the presence of female co-workers because they believe that their presence automatically devalues the importance and distinctiveness of their occupations.⁴²

³⁸ Murray (1988); Bendick & Nunes (in press, 2011).

³⁹ Eisenberg (1998); Moccio (2009), p.164.

⁴⁰ Price (2002), p. 102.

⁴¹ Waldinger (1996) ; Toussaint-Comeau et al. (2005).

⁴² DCA (2005); Martin & Jurik (2007); O’Farrell & Harlan (1982); Ragins & Sundstrom (1989).

Hostility, Harassment, and Lack of Help

The psychological and organizational processes just discussed are not mere theory. Every day, they get translated into practical barriers to employment of women on construction sites. Maintaining a hostile, harassing, unfriendly, and uncooperative workplace wears down, intimidates, and drives women away from where they are not wanted.

This hostility is often expressed in shunning and isolation of women workers by their co-workers on construction sites. Lack of routine helpfulness -- failing to share useful information with fellow workers or assist them in tasks requiring teamwork -- makes construction work more difficult and therefore less attractive.⁴³ Such behavior tends to be more prevalent, intense, explicit, and uncontrolled in on-site construction work than in work situations in other industries.⁴⁴

The process of exclusion often begins at the gateways to construction careers, including apprenticeships. The number of women who receive construction craft training through registered apprenticeship programs, always low, dropped from 4.5% in 1995 to 2.8 % in 2003.⁴⁵ This low representation is maintained in large part by control of the inflow of trainees into these programs.⁴⁶ In the admission process, personal introductions, referrals, recommendations, and favorable assessments may, consciously or unconsciously, be reserved for male applicants. In addition, information about how and when to apply may be selectively made available only to “insiders.” For example, one study reported that “...Operating Engineers for years only opened their program for two weeks during the year, during which only family members would know to apply.”⁴⁷

These same personal networks involved in getting into the trades are also important in finding work once qualified.⁴⁸ Gender differences in access to information about project hiring opportunities, as well as referrals and recommendations, can make

⁴³ Menches & Abraham (2007), Moccio (2009). See also Schroedel (1985); Gluck (1987); Martin (1988), Aronowitz (1992); Ferguson (1994); Eisenberger (1998); Roediger (1999); and Swann (no date).

⁴⁴ For example, Mansfield et al. (1991) found that women in the trades faced higher rates of harassment (60%) than clerical workers (6%). In addition, Post (2003) reported that female tradeswomen sustain insult, injury and indignity more than female design and construction professionals.

⁴⁵ Berik & Bilginsoy (2006), p. 328.

⁴⁶ Gender differences in retention rates among apprentices is also an issue; see Berik & Bilginsoy (2006).

⁴⁷ Price (2002), p. 103.

⁴⁸ Price (2002); Granovetter & Tilly (1988); Granovetter (1985).

major differences in earnings and advancement, and therefore in men's and women's continued employment in construction.⁴⁹

The barriers to construction employment that women encounter are not limited to the lack of helpfulness just described. Women also commonly find themselves subjected to hostile behavior bluntly intended to drive them out.⁵⁰ The following excerpts from recent research illustrate harassment and hostility in daily work life on construction sites:⁵¹

- In construction, mild jokes and horseplay are a common part of welcoming younger workers into construction work. However, this initiation process often works differently for male and female workers. Jokes for male apprentices normally are related to their work (e.g., requests to find a sky hook or a left handed wrench). For women, the jokes are sexual in nature, designed to “redraw the boundaries between insiders and outsiders.” One researcher reported that during her two and a half years as a construction worker, only three jokes were related to her as a worker, while all the rest were sexual. These jokes were intended to maintain distinctions between her and other workers who were men.⁵²
- In the construction industry, “Male workers often try to rid the work site of women workers by vulgar displays of pornography or inappropriate jokes or language.”⁵³
- “... I explained why I didn't think there should be a drinking party with a stripper on a union jobsite.” “Just because we have to take you in,” the steward said, “doesn't mean anything has to change because you're here.”⁵⁴
- In construction, “Women are more apt to be touched, grabbed, or stalked. Men are also more apt to physically mark their work environments with sexually objectifying material.”⁵⁵

⁴⁹ Menches & Abraham (2007), p. 702.

⁵⁰ Jacobs (1989), p. 62; Padavic and Reskin (1990); Walshok (1981); Aga (1984); Swerdlow (1989); Yount (1989).

⁵¹ Additional illustrations are reported at ENR (1998), p. 26,, and the litigation summarized in Appendix D.

⁵² Paap (2008), p. 69.

⁵³ Moccio (2009), p. 162.

⁵⁴ Eisenberg (1998), p. 69.

⁵⁵ Gruber (1998), p. 314.

- “It’s an unfortunate fact of life that a number of men in this field [carpentry] do feel threatened by a woman whose skill and work ethic outstrip their own.... I have seen some [women] driven from shops when the males feel threatened...”⁵⁶
- Hostile behavior toward women, including that involving serious risk of injury, has been documented for a number of different trades.⁵⁷ These incidents range from isolation and veiled threats to physical harassment and direct intimidation. Particularly chilling are accounts of supposed “workplace accidents” which were actually physical attacks. In one incident, an electrician journey worker during construction of the Javits Convention Center in New York City, was beaten and raped.⁵⁸
- “I was deliberately set up, actually, on two occasions. Once I had circuits turned on when I was trimming out receptacles in a high-rise office space. I don’t know who turned the circuits on. Another time I’d been hooking up fire alarm exit signs and I went back to check some. I was up at a light exit sign, and someone had actually tied the ground wire into the hot wire on the other end of the Scotchlok and as I was taking it out, someone turned it on and it blew up in front of me.”⁵⁹

The more severe such harassment, the more severe its physical or psychological harm. However, even relatively mild forms have adverse consequences for women’s personal well-being⁶⁰ and the likelihood that they continue to work in construction. For example, a survey of 657 members of the National Association of Women in Construction found that the psychological climate of gender inequity is negatively related to their satisfaction and career commitment and positively related to their turnover intentions.⁶¹

Tolerance of Hostile Behavior

To be sure, the most extreme of the above examples are relatively rare. However, they are clearly not unknown. Furthermore, the less dramatic ones -- such as

⁵⁶ “Women in Woodworking” (2006).

⁵⁷ Paap (2009); Schroedel (1985); Martin (1988); Eisenberg (1998); Ferguson (1994).

⁵⁸ Moccio (2009), p. 163.

⁵⁹ Eisenberg (1998), p. 85.

⁶⁰ Schneider et al. (1997); Crull (1982).

⁶¹ King et al. (2009), p. 503. See also Sanchez & Brock, 1996; Gutek (1985); Loy & Stewart (1984); Morrow et al. (1994); and U.S. Merit Systems Protection Board, (1981).

pornography, isolation, and failure to provide the same information and help routinely provided to men -- are not at all rare.

Equally importantly, when such problems do arise, women commonly find that they have few resources to which they can turn for assistance, where they can lodge complaints, or on which they can rely to prevent future recurrence. Women's isolation is particularly evident in terms of the absence of three types of potential support.

The most obvious support system that is absent is women co-workers. The low numbers of women in construction means that, in most worksites where women are present at all, they work in isolation from each other. That circumstance, in turn, exposes women to the heightened visibility and pressure common to individuals who are the "token" or isolated representative of their group.⁶² It also means that they cannot provide assistance substituting for the lack of support from male co-workers. And it means that they do not form a "critical mass" sufficient in number to force changes in the workplace.⁶³

The experience of being chronically an isolated pioneer is illustrated in one study as follows:⁶⁴

"I went out and busted my heinie every day and made a name for myself," says Tawny Sayers, a single mom who graduated from Renton Technical and worked laying concrete and pipe for eight years.... "It's very physical work and a lot of women don't want to get dirt under their fingernails or listen to foul-mouthed men, but that's what a woman's gotta do if she wants to make it.... As a woman, I was always under the microscope. I couldn't sit around like the guys. I had to work harder than they did to earn their respect."

While not being able to rely on support from female co-workers, women in construction also cannot commonly rely on support from male co-workers. To be sure, not every man working in construction supports the oppositional culture that dominates the industry. Some men welcome women and provide collegial support.⁶⁵ However, research documents that they are in the minority.

⁶² King (2009); Young & James (2001); Kanter (1977).

⁶³ Post (2003); Eisenberg (1998), p. 4.

⁶⁴ Kadish (2005). The pressures on isolated women construction "pioneers" are further illustrated in Walshok (1981); Martin (1988); Ferguson (1994); Eisenberg (1998); Carlson (1999); Paap (2008); and Moccio (2009). The experiences documented in the earliest of these writings, from the 1970s and 1980s, are strikingly similar to those reported in recent years.

⁶⁵ For a description of such male "exceptions to the rule," see Eisenberg (1998), pp. 97-109.

Furthermore, men who may personally feel supportive, or at least neutral, toward women co-workers, often face social pressure not to publicly oppose the dominantly hostile behavior. Although they may treat women fairly in their own interactions, peer pressure means that they may remain silent about the behavior of others. Intervening to stop hostility might incur the wrath of the union or the foreman with the power to allocate work assignments or lay workers off.⁶⁶ One researcher describes the effects of such processes of social control as follows:⁶⁷

I was struck by the contrasting public pressures for racist, sexist and homophobic sentiments (or at the very least a neutral façade at their expression) and the somewhat more tolerant selves revealed in private.

The third type of missing support for women construction workers is that of “official” mechanisms to control or correct hostile, harassing, or discriminatory behavior. Potentially, such assistance might be provided by:

- project managers or other supervisors working on the construction site;
- human resource officials of the employing firms;
- owners of the construction project and their on-site representatives; or
- shop stewards and other union officials.

However, in practice, women typically find that these actors do not offer assistance either proactively or in response to complaints. They may “turn a blind eye” and ignore the situation, or sometimes they themselves may be active participants.⁶⁸ Such failures of “official” mechanisms to protect women construction workers are illustrated in the following examples drawn from recent litigation:⁶⁹

- In a 2005 litigation settlement, substantial financial damages were paid by both a construction contractor and a construction management firm after they allegedly failed to respond to a woman bricklayer’s complaints of sexual harassment and instead retaliated by firing her.
- In 2006, a Missouri jury found in favor of a woman construction driver/tool runner who alleged that she had been sexually harassed by her foreman.

⁶⁶ Moccio (2009), p. 165.

⁶⁷ Paap (2008), p. 81.

⁶⁸ Moccio (2009), p. 164; King et al. (2009), p. 509.

⁶⁹ These cases are summarized in rows (3), (18), (19), (32), (34), (36) and (38) of Appendix Table D.2 in Appendix D.

- In 2007, the Seventh Circuit Court of Appeals upheld a verdict in favor of a woman whose union refused to provide her on-the-job training to become a licensed construction elevator operator.
- In a 2009 litigation settlement, a construction contractor paid substantial damages after it allegedly failed to provide restroom facilities at a construction worksite, forcing women to urinate outside in public.
- In 2007, an Indiana jury found in favor of a woman millwright/welder whose union refused to place her on the referral list for job opportunities.
- In a 2009 litigation settlement in Texas, a drywall company paid substantial financial damages to a woman laborer it allegedly fired in retaliation for her complaints about sexually explicit remarks and graffiti.
- In 2010, a New York court found that the New York Department of Transportation failed to hire women as bridge painters solely because they were women.

Such lack of responsiveness by co-workers and officials is often partially maintained by rationalizations that such behavior is justified because, in today's legal and social climate, it is men rather than women who are being discriminated against and attacked. These rationalizations tend to follow one or more of three basic lines of thinking:⁷⁰

- Affirmative action harms men. Regardless of how or why they actually were hired, women construction workers are often automatically associated with affirmative action, and affirmative action is condemned as unfair to men. In this reasoning, affirmative action is seen as interfering with an employment system that, in its absence, is fair and merit-based, depriving men of jobs they deserve and forcing them to compensate for incompetent fellow workers. Passive or active acts of sexism are an appropriate reaction to such unfairness.⁷¹
- Women cause the problems. A related justification for treating women construction workers badly is that the women themselves are the cause of discrimination problems in construction workplaces because if they were not there, these issues would not arise. The women disrupted a smoothly-functioning, friendly way of life on the job. They therefore have brought hostile responses on themselves.⁷²

⁷⁰ Paap (2008), pp. 387–388.

⁷¹ Paap (2008), p. 64.

⁷² Paap (2008), p. 97. In the same spirit, women report that when they complain about harassment, they become labeled as “toxic,” and that reputation follows them from site to site.

- Women unfairly accuse men. Another variant focuses on women as overly sensitive to slights and inherently hostile to men, leading them to unfairly accuse innocent, well-intentioned male workers. Therefore it is unnecessary and unreasonable to respond to these accusations. “Zero tolerance” policies are unjust and overly punitive, stacking the deck against the average man “just for telling an inappropriate joke.” Along these lines, women complaining about mistreatment often report being told that “it’s just the way he is” or “don’t let it bother you” or “get used to it.”⁷³

⁷³ Paap (2008); Eisenberg (1998), p. 77.

Chapter 5

Utilization of Minorities

Paralleling the previous chapter on women, this chapter examines the utilization of African Americans, other racial minorities, and Hispanics.¹ Thus, the chapter first estimates the extent to which racial/ethnic minority groups are under-represented in on-site construction occupations in the construction industry. It then discusses attitudes and employment practices in the industry underlying that under-representation.

Numerical Estimates for African Americans

African Americans constitute the largest racial minority group nation-wide, accounting for 11.5% of the Civilian Labor Force.²

As with women, the first source of information we analyze is the “EEO Special Tabulation” based on the 2000 Census. Table 5.1 reports on African Americans for the 10 largest construction occupations in these data, as well as the total for all 27 construction occupations reported there.

According to Column (b) of the table, in 2000, overall utilization of African Americans in on-site construction occupations in the construction industry was 6.3%. Column (c) then provides the comparable figures for these same occupations outside the construction industry, and these average 10.6%. Treating Column (c) as a benchmark for expected representation, Column (d) reports the difference between Column (c) and Column (b). For the 27 on-site construction occupations combined, the under-utilization reported in Column (d) averaged 4.3%, a figure more than two-thirds as large as their actual utilization of 6.3%.

¹ In data reported here from the 2000 Census and American Community Survey 2006-2008, each racial group includes persons reporting themselves in that racial group alone and those reporting themselves in that racial group in combination with another group (e.g., African American + American Indian). Thus, figures computed for all racial groups including whites total more than 100% of all reported workers. This is not an error but simply a reminder of what the data represent.

The same issue does not arise for EEO-1 data, where individuals are reported only within one racial/ethnic group. Nor does it arise for Hispanics in this chapter or women in the previous chapter, since in those cases there is no overlap between the groups and their “counter-groups” (i.e., males and females and non-Hispanics and Hispanics).

² Toosi (2009), p. 32.

Table 5.1 ³
African American Utilization in On-Site Construction
Occupations in the Construction Industry,
2000 Census EEO Special Tabulation

(a)	(b)	(c)	(d)
Occupation	Construction Industry	Other Industries	Under-Utilization
Carpenters	4.0%	6.9%	- 2.9%
Laborers	8.5%	14.1%	- 5.6%
Electricians	5.4%	6.8%	- 1.4%
Painters	5.9%	12.6%	- 6.7%
Pipelayers & plumbers	5.6%	9.5%	- 3.9%
Equipment operators	5.8%	7.7%	- 1.9%
Roofers	6.7%	14.5%	- 7.9%
Brick & stone masons	11.5%	13.8%	- 2.3%
Drywall installers	4.3%	12.1%	- 7.8%
Floor installers	4.3%	6.5%	-2.1%
27 occupations	6.3%	10.6%	- 4.3%

African Americans were under-utilized in 24 (92.6%) of the 27 occupations analyzed.⁴ When the 4.3% shortfall rate is applied to the 4.9 million workers in the construction industry in 2000, the shortfall totals 210,580 “missing” African American workers.

The second data source examined is the American Community Survey 2006-2008. Table 5.2 presents an analysis parallel to Table 5.1 but based on these more recent data. It shows African Americans constituting 7.7% of workers in on-site construction occupations in the construction industry, a rate 1.1% higher than the 6.3% in 2000. However, utilization in construction occupations in industries other than construction rose even more over the same period, from 10.6% to 12.3%. Accordingly, the under-utilization of African Americans in the construction industry increased between 2000 and 2006-2008, from the 4.3% reported in Table 5.1 to the 4.5% reported in Table 5.2.

³ Table 5.1 is extracted from Appendix Table A.2 in Appendix A.

⁴ The three exceptions are Miscellaneous Construction & Related Workers, Hazardous Materials Removal Workers, and Septic Tank Servicers & Sewer Pipe Cleaners. Together, these occupations account for 0.5% of on-site construction workers in the construction industry.

Table 5.2 ⁵
African American Utilization in On-site Construction
Occupations in the Construction Industry,
American Community Survey 2006-2008

(a)	(b)	(c)	(d)
Occupation	Construction Industry	Other Industries	Under-Utilization
Laborers	9.5%	16.8%	- 7.2%
Carpenters	5.3%	7.5%	- 2.1%
Painters	7.0%	14.3%	- 7.3%
Electricians	6.9%	9.4%	- 2.6%
Pipelayers & plumbers	7.1%	11.5%	- 4.3%
Equipment operators	6.2%	8.9%	- 2.7%
Roofers	8.5%	15.4%	- 6.9%
Brick & stone masons	12.9%	12.9%	0.1%
Drywall installers	6.5%	12.1%	- 5.6%
Floor installers	5.2%	7.1%	-1.9%
27 occupations	7.7%	12.3%	- 4.5%

African Americans were under-utilized in 23 (85.2%) of the 27 occupations analyzed.⁶ The overall under-utilization shown in Table 5.2 -- 4.5% -- is 58% as large as the 7.7% actual utilization reported there. When the 4.5% shortfall rate is applied to the 8.5 million workers in the construction industry in 2006-2008, the shortfall totals 387,721 “missing” African American construction workers.

As in Chapter 4, ACS data can also be used to analyze the “glass ceiling” effect. Table 5.3 presents such an analysis for 25 on-site construction occupations for which consistent earnings data are readily available. The table reveals that African Americans account for 6.8% of the 10 best-paid occupations among the 25, or 68% of their 10.0% representation in the entry-level occupations reported in the same table. Similarly, African Americans account for 8.5% of the “intermediate-level” occupations, 85% of their entry-level representation. This pattern is consistent with a “glass ceiling” pattern in which African Americans remain disproportionately concentrated at the entry level rather than advancing in their construction careers at rates similar to their white counterparts.

⁵ Table 5.2 is extracted from Appendix Table B.2 in Appendix B.

⁶ The exceptions are: Brick Masons & Stone Masons, Highway Maintenance Workers, Miscellaneous Construction Workers including Sewer Cleaners, and Paving Equipment Operators. Together, these occupations account for 5.2% of on-site construction workers in the construction industry.

Table 5.3 ⁷
Representation of African Americans in Construction Occupations
Grouped by Earnings, ACS 2006-2008

(a)	(b)	(c)	(d)
Category	Examples	Annual Earnings	% Af. Am.
10 best- paid occupations	Electricians Plumbers	\$40,000 - \$80,000	6.8%
13 intermediate-level occupations	Drywall Installers Equipment Operators	\$30,000 - \$40,000	8.5%
2 entry-level occupations	Laborers Helpers	\$25,000 - \$30,000	10.0%

The third source of data is EEO-1 reports for 2008, presented in Table 5.4. According to this table, African Americans accounted for 6.0% of workers in skilled construction occupations, 9.6% of semi-skilled operatives, and 9.2% of laborers. However, in each case, the expected representation was higher. For all construction sectors combined, African Americans were under-utilized to the extent of 3.3% of craft workers, 4.1% of semi-skilled operatives, and 8.6% of unskilled laborers.

This shortfall encompasses all nine employment categories examined in Table 5.4. Thus, African Americans are under-utilized as skilled craft workers by 4.2% in Construction of Buildings, 1.5% in Heavy Construction, and 3.7% in Specialty Trade Contracting, while concurrently, in the Specialty Trades sector, the shortfall of African Americans is 3.7% in skilled occupations, 5.1% in semi-skilled occupations, and 10.2% in unskilled occupations.

According to the final column of Table 5.4, the number of “missing” African American construction workers estimated from EEO-1 reports totals 50,213. This figure is consistent with the 387,721 shortfall estimated using ACS 2006-2008 in the same time period, since the 387,721 covers all construction employers while the 50,213 covers only firms large enough to file EEO-1 reports.

Table 5.4 also reveals that, consistent with the “glass ceiling” pattern observed in ACS data in Table 5.3, the employment representation of African Americans in EEO-1 data is lower among skilled construction workers (between 5.1% and 7.8%) than among

⁷ Table 5.3 is excerpted from Appendix Table B.10 in Appendix B.

their semi-skilled colleagues (between 7.6% to 10.7%) and unskilled colleagues (between 7.6% and 10.7%).

Table 5.4 ⁸
Shortfall of African Americans in Selected Occupations in the
Construction Industry, 2008, EEO-1 Reports

(a) Occupations	(b) Construction Sector	(c) Actual Af. Ams.	(d) Expected Af. Ams.	(e) Shortfall %	(f) Shortfall Number
Skilled craft workers	All construction	6.0%	9.3%	- 3.3%	20,897
	Constr. of buildings	5.1%		- 4.2%	
	Heavy construction	7.8%		- 1.5%	
	Specialty Trades	5.6%		- 3.7%	
Semi-skilled operatives	All construction	9.6%	13.7%	-4.1%	6,786
	Constr. of buildings	11.5%		-2.2%	
	Heavy construction	9.9%		-3.8%	
	Specialty trades	8.6%		-5.1%	
Unskilled laborers	All construction	9.2%	17.8%	- 8.6%	22,530
	Constr. of buildings	10.3%		- 7.5%	
	Heavy construction	10.7%		- 7.1%	
	Specialty trades	7.6%		-10.2%	
Total					50,213

Table 5.5 reports EEO-1 data on African American shortfall in construction employment over the 33-year period from 1975 through 2008. It shows that, for all three types of construction workers examined, the under-utilization of African Americans has been growing over this period and is substantially greater in 2008 than it was 33 years earlier. Between 1975 and 2008, African American under-utilization increased an average of 0.17 percentage points per year for craft workers, 0.25 percentage points for operatives, and 0.61 percentage points for laborers. Perhaps most dramatically, the table reveals that among laborers, African Americans were over-represented by 10.2 % in 1975 but 33 years later, that “surplus” has reversed into a shortfall of 10.0%.

⁸ Table 5.4 is extracted from Appendix Table C.2 in Appendix C.

Table 5.5⁹
Shortfall of African Americans in Selected Occupations in
the Construction Industry, 1975-2008, EEO-1 Reports

(a)	(b)	(c)	(d)
Year	Skilled Craft Workers	Semi-skilled Operatives	Unskilled Laborers
1975	0.8%	- 0.1%	10.2%
1980	- 1.1%	- 0.5%	8.0%
1985	- 0.9%	- 3.0%	5.1%
1990	- 1.2%	- 2.7%	2.9%
1995	- 2.4%	- 4.2%	- 1.3%
2000	- 2.8%	- 5.6%	- 4.8%
2008	- 4.9%	- 8.3%	- 10.0%
Average annual rate of change	- 0.17%	- .25%	- .61%

The final database examined is the Current Population Survey (CPS), the only source offering comprehensive data on the demographic characteristics of union members.¹⁰ As Chapter 2 discussed, unionized construction positions are typically considered desirable because of their higher wages, more extensive fringe benefits, and enhanced workplace protections. According to CPS data for 2005 through 2009, 7.1% of African American workers employed in 12 of the most commonly-unionized construction crafts¹¹ are union members or are represented by unions. The counterpart figure for white non-Hispanics working in those same crafts is 27.4%, nearly quadruple the African American rate.

⁹ Table 5.5 is extracted from Appendix Table C.7 in Appendix C.

¹⁰ In this report, data on union membership from the CPS is presented only for African Americans and Hispanics, not for women or other racial minority groups. The sample of construction workers in the CPS is too small to provide reliable figures for these latter groups.

¹¹ These crafts are Brick Masons, Carpenters, Cement Masons, Electricians, Elevator Installers, Operating Engineers, Painters, Pile Driver Operators, Plasterers & Stucco Masons, Plumbers & Pipefitters, Sheet Metal Workers, and Structural Iron Workers.

Numerical Estimates for Other Racial Minorities

The 2000 Census and ACS 2006-2008 provide data on three racial minority groups other than African Americans -- Asians, American Indians/Alaska Natives, and Native Hawaiians/Other Pacific Islanders -- as well as persons reporting themselves in more than two racial groups or in some other group.

As Chapter 7 discusses, these groups account for substantial proportions of the labor force in selected locations in the nation, such as Asians in California, Native Hawaiians in Hawaii, and American Indians in New Mexico. However, in the majority of locales nationwide, they are present in small numbers, and consequently their nationwide totals are modest. Therefore, although these groups are analyzed in Appendices A, B, and C in the same detail as African Americans, the results are summarized in this chapter more briefly. In addition, in this chapter and throughout this report, two of these groups -- American Indians/Alaska Natives and Native Hawaiians/Other Pacific Islanders -- are combined because of their common status as “native Americans” and their tendency not to be found in large numbers in the same local labor markets.

In Table 5.6, we turn once again to the 2000 Census. Column (b) of the table confirms that the three racial minority groups each account for only a small proportion of the nation’s workforce in construction occupations. Together, the three add up to nationwide expected representation of 3.4%.

Despite their small size, the groups exhibit consistent under-representation. For all 27 construction occupations combined, each of the three groups is under-utilized, with their combined under-utilization totaling 0.7% of construction employment nation-wide. Moreover, a shortfall exists for at least one of the three groups in 26 (96.2%) of the 27 occupations examined.¹²

A shortfall of 0.7 is 21% the size of the actual representation of the three groups. When applied to the 4.9 million persons employed in the construction occupations in 2000, this shortfall corresponds to 34,365 “missing” construction workers of non-African American racial minority background.¹³

¹² The exception is Construction and Building Inspectors, which accounts for 0.5% of all on-site construction employment.

¹³ This label is a slight over-simplification. Persons in this group could have some African American background, if that is one of the races leading to their reporting themselves in more than two racial groups.

Table 5.6 ¹⁴
Under-Utilization of Racial Minorities other than African Americans
in On-Site Construction Occupations in the Construction Industry,
2000 Census EEO Special Tabulation

(a)	(b)	(c)	(d)	(e)
Racial Group	Construction Industry	Other Industries	Under-Utilization	% of 27 Occupations with Under-Utilization
Asians	1.0%	1.2%	- 0.2%	66.7%
Am. Ind. & Nat Haw. ¹⁵	1.6%	2.0%	- 0.4%	74.1%
More than 2 races	0.8%	0.9%	- 0.1%	63.0%
Total	3.4%	4.1%	- 0.7%	96.3% ¹⁶

Table 5.7 parallels Table 5.6 but uses the more recent data from the American Community Survey 2006-2008. It shows the three racial minority groupings accounting for 4.0% of construction employment in 2006-2008, 0.6 percentage points more than in 2000. However, the utilization in construction occupations in non-construction industries increased even more over the same period, from 4.1% to 4.9%. Accordingly, the under-utilization of these three racial minority groups in construction increased between 2000 and 2006-2008, from the 0.7% reported in Table 5.75 to the 0.9% in Table 5.7.

According to Table 5.7, at least one of the three racial minority groups was under-utilized in 22 (81.5%) of the 27 occupations analyzed.¹⁷ The overall under-utilization shown in Table 5.7 -- 0.9% -- is 22% as large as the 4.0% actual utilization reported there. When the 0.9% shortfall rate is applied to the 8.5 million workers in the construction industry in 2006-2008, the shortfall totals 75,000 “missing” construction workers of non-African American racial minority background.

¹⁴ Table 5.6 is extracted from Appendix Tables A.3 - A.5 in Appendix A.

¹⁵ Combines American Indians/Alaska Natives and Native Hawaiians/Other Pacific Islanders.

¹⁶ This is the percent of occupations with a shortfall for one or more of the three groups.

¹⁷ The exceptions were: Cement Masons, Structural Iron & Steel Workers, Plasterers & Stucco Masons, Construction & Building Inspectors, and Glaziers. Together, these occupations account for 3.8% of on-site construction workers in the construction industry.

Table 5.7 ¹⁸
Under-Utilization of Racial Minorities other than African Americans
in On-Site Construction Occupations in the Construction Industry,
American Community Survey 2006-2008

(a)	(b)	(c)	(d)	(e)
Racial Group	Construction Industry	Other Industries	Under-Utilization	% of 27 Occupations with Under-Utilization
Asians	0.3%	0.4%	-0.1%	37.0%
Am. Ind. & Nat Haw. ¹⁹	2.2%%	2.8%	- 0.6%	66.7%
More than 2 races	1.5%	1.7%	- 0.2%	63.0%
Total	4.0%	4.9	- 0.9%	81.5% ²⁰

Table 5.8 present a “glass ceiling” analysis for the three smaller racial minority groups. It reports that, among the 25 construction occupations analyzed, all three groups are represented in the highest-paid occupations and the intermediate occupations at a lower rate than in entry-level occupations.

¹⁸ Table 5.7 is extracted from Appendix Tables B.3 - B.5 in Appendix B.

¹⁹ Combines American Indians/Alaska Natives and Native Hawaiians/Other Pacific Islanders.

²⁰ Percent of occupations with a shortfall in one or more of the three groups.

Table 5.8 ²¹
Representation of Racial Minorities other than
African Americans in Construction Occupations
Grouped by Earnings, ACS 2006-2008

(a)	(b)	(c)	(d)
Category	% Asian	% Am. Ind./Al. Nat. & Nat. Haw./ Oth. Pac. Is.	% More than 2 Races/ Other
10 best- paid occupations	0.3%	2.1%	1.4%
13 intermediate-level occupations	0.3%	2.3%	1.6%
2 entry-level occupations	0.4%	2.3%	2.0%

The third source of data is EEO-1 reports for 2008, presented in Table 5.9. According to this table, the three non-African American racial minority groups accounted for 2.8% of skilled workers in the construction industry, 2.9% of semi-skilled operatives, and 2.3% of laborers. However, the expected representation of the three minority groups is substantially higher than that, leading to under-utilization of 3.3% of craft workers, 4.1% of semi-skilled operatives, and 3.2% of unskilled laborers. Moreover, shortfall appears in each of these occupational groups in each of the three construction subsectors examined in the table. According to the final column of Table 5.9, the number of “missing” construction workers at EEO-1 reporting firms in 2008 for the three minority groups totals 22,004.

²¹ Table 5.8 is excerpted from Appendix Tables B.11 through B13 in Appendix B.

Table 5.9²²
Shortfall of Racial Groups other than African Americans
In Selected Occupations in the Construction Industry,
2008, According to EEO-1 Data

(a) Occupations	(b) Construction Sector	(c) Actual Minority	(d) Expected Minority.	(e) Shortfall %	(f) Shortfall Number
Skilled craft workers	All construction	2.8%	4.2%	- 1.5%	-9,218
	Constr. of buildings	3.0%		- 1.2%	
	Heavy construction	2.4%		- 1.9%	
	Specialty trades	2.4%		- 1.9%	
Semi-skilled operatives	All construction	2.9%	5.6%	-2.7%	-4,426
	Constr. of buildings	2.9%		-2.6%	
	Heavy construction	2.9%		-2.7%	
	Specialty trades	2.6%		-3.0%	
Unskilled laborers	All construction	2.3%	5.5%	- 3.2%	-8,360
	Constr. of buildings	2.6%		- 2.9%	
	Heavy construction	3.0%		- 2.5%	
	Specialty trades	2.1%		-3.4%	
Total					-22,004

In older EEO-1 data, only two non-African American racial minority groups are reported: Asians and American Indians. Therefore, in reporting EEO-1 data over the period 1975-2008, Table 5.10 examines only these two groups. The table shows increasing under-utilization throughout the period, turning a small “surplus” in 1975 into a substantial shortfall 33 years later; the annual increase in shortfall averaged .04% per year for craft workers, .11% for operatives, and .10% for laborers.

²² Table 5.9 is extracted from Appendix Table C.3 in Appendix C.

Table 5.10²³
Shortfall of Asians and American Indians in Selected
Occupations in the Construction Industry,
1975-2008, According to EEO-1 Data

Year	Skilled Craft Workers	Semi-skilled Operatives	Unskilled Laborers
1975	0.5%	0.5%	0.1%
1980	- 0.4%	0.1%	- 0.6%
1985	0.2%	0.0%	- 0.9%
1990	- 0.4%	- 1.2%	- 1.3%
1995	- 0.1%	- 1.6%	- 1.9%
2000	- 1.2%	- 2.7%	- 2.9%
2008	- 0.8%	- 3.1%	- 3.3%
Average annual rate of change	- 0.04%	- .11%	- .10%

Numerical Estimates for Hispanics

For both African Americans and the other racial minority groups examined in this chapter, perhaps the most striking pattern is their increasing under-utilization over recent decades. The “other side of the coin” of these patterns is primarily the rapidly increasing representation of Hispanics in the construction labor force.

In part, this increase simply reflects the more than tripling of Hispanics within the overall U.S. population over the past 40 years, from 4.7% in 1970 to 15.5% in 2010.²⁴ That increase has been roughly paralleled in the “blue collar” non-construction industries used throughout this report as a comparison group for construction employment. However, the increase of Hispanics in construction employment has been more rapid than that, including a:²⁵

²³ Table 5.10 is extracted from Appendix Table C.8 in Appendix C.

²⁴ U.S. Census (2010D), p. 4.

²⁵ See Appendix Table C.9 in Appendix C. However, with the downturn in construction during the current recession, some immigrants have left the United States, so that numbers for

- nearly seven-fold increase in construction craft workers, from 4.0% to 27.2%;
- more than quadrupling among construction operatives, from 6.6% to 27.6%; and
- more than quadrupling among construction laborers, from 11.2% to 45.6%.

Today, more than one in four employed Hispanic males works in a construction or maintenance occupation.²⁶

Moreover, in some local labor markets, Hispanic representation among construction workers has become particularly prevalent. For instance, Hispanics constitute 90.5% of carpenters in the Brownsville, Texas metropolitan area and 73.2% of construction laborers in the Miami metropolitan area.²⁷

Another difference between Hispanic construction employment and that of the racial minorities examined earlier in this chapter is that, in terms of overall national patterns, under-utilization of Hispanics is the exception rather than the rule. Of course, over-utilization in nation-wide data can coincide with under-utilization of Hispanics by individual construction employers, as well as in certain construction occupations and certain locales. It can also co-exist with Hispanics' experiencing discrimination or harassment in construction employment. However, such problems operate in a context somewhat different from that of substantial under-representation experienced by women and members of racial minority groups.

That overall context is first demonstrated in Table 5.11 using data from the EEO Special Tabulation of the 2000 Census. According to that table, in 2000, overall utilization of Hispanics in on-site construction occupations in the construction industry was 19.6%, compared to an expected representation of 16.1%, for a "surplus" of 3.5%.

Hispanics were under-utilized in nine (33.3%) of the 27 occupations analyzed: Carpenters, Floor Installers, Sheet Metal Workers, Highway Maintenance Workers, Structural Iron and Steel Workers, Elevator Installers, Glaziers, Paperhangers, and Boilermakers. Together, these occupations account for 31.1% of employment in the 27 occupations analyzed.

immigrants who are racial or ethnic minorities have decreased, at least for the short term. In particular, during 2008, Hispanic employment in the construction industry fell by almost 300,000 workers (CWPR, 2009, p.2).

²⁶ U.S. Census (2010D), p. 35.

²⁷ U.S. Census (2010A).

Table 5.11 ²⁸
Hispanic Utilization in On-Site Construction
Occupations in the Construction Industry,
2000 Census EEO Special Tabulation

(a)	(b)	(c)	(d)
Occupation	Construction Industry	Other Industries	Under-Utilization ²⁹
Carpenters	14.8%	16.4%	- 1.6%
Laborers	29.8%	19.8%	10.0%
Electricians	9.0%	7.4%	1.7%
Painters	25.6%	21.2%	4.4%
Pipelayers & plumbers	12.1%	9.8%	2.3%
Equipment operators	9.4%	7.8%	1.6%
Roofers	28.6%	19.2%	9.5%
Brick & stone masons	19.5%	12.0%	7.5%
Drywall installers	29.9%	20.5%	9.4%
Floor installers	20.6%	26.8%	- 6.3%
27 occupations	19.6%	16.1%	3.5%

The second data source illustrating such patterns is the American Community Survey 2006-2008, reported in Table 5.12. The table shows Hispanics constituting 28.5% of workers in the 27 construction occupations in the construction industry, compared to 26.5% in the same occupations in other industries, for a “surplus” utilization of 1.4%.

In 2006-2008, Hispanics were under-utilized in 9 (33.3%) of the 27 occupations analyzed. Among these, five occupations showed shortfall in both 2000 and 2006-2008: Carpenters, Floor Installers, Structural Iron Workers, Paperhangers, and Boilermakers. The other occupations, showing shortfall only in 2006-2008, were: Construction Trade Helpers, Brick Masons, Plasterers & Stucco Masons, and Insulation Workers. Together, these nine occupations account for 31.2% of employment in the 27 occupations analyzed.

²⁸ Table 5.11 is extracted from Appendix Table A.7 in Appendix A.

²⁹ “ - ” indicates under-utilization; a positive number indicates utilization at a higher rate than outside the construction industry.

Table 5.12 ³⁰
Hispanic Utilization in On-site Construction
Occupations in the Construction Industry,
American Community Survey 2006-2008

(a)	(b)	(c)	(d)
Occupation	Construction Industry	All Other Industries	Under-Utilization³¹
Laborers	34.5%	19.6%	14.9%
Carpenters	23.4%	27.1%	- 3.7%
Painters	34.1%	29.1%	5.0%
Electricians	15.8%	9.5%	6.3%
Pipelayers & plumbers	20.0%	15.9%	4.1%
Equipment operators	13.0%	10.7%	2.3%
Roofers	36.6%	36.5%	0.1%
Brick & stone masons	31.2%	51.4%	- 20.2%
Drywall installers	45.5%	20.8%	24.7%
Floor installers	36.6%	37.4%	- 0.9%
27 occupations	28.1%	26.5%	1.4%

Despite the overall over-representation documented in Table 5.12, the representation of Hispanics follows a “glass ceiling” pattern of diminishing representation of a minority group in higher-level occupations. Column (f) of Table 5.13 reveals that, in data from the ACS 2006-2008, Hispanics are a lower proportion of workers in the ten best-paid occupations (23.9%) than of their colleagues in entry-level occupations (34.5%) and intermediate-level occupations (35.2%).

³⁰ Table 5.12 is extracted from Appendix Table B.7 in Appendix B.

³¹ “ - ” indicates under-utilization; a positive number indicates utilization at a higher rather than the standard of availability.

Table 5.13 ³²
Representation of Hispanics in Construction Occupations
Grouped by Earnings, ACS 2006-2008

(a)	(b)	(c)	(d)
Category	Examples	Annual Earnings	% Hispanic
10 best-paid occupations	Electricians Plumbers	\$40,000 - \$80,000	23.9%
13 intermediate level occupations	Drywall installers Equipment operators	\$30,000 - \$40,000	35.2%
2 entry-level occupations	Laborers Helpers	\$25,000 - \$30,000	34.5%

Data from EEO-1 reports for 2008 are presented in Table 5.14. According to this table, Hispanics accounted for 27.2% of workers in skilled construction occupations, 27.6% of semi-skilled operatives, and 45.5% of laborers. In each case, these figures are substantially higher than the expected utilization. For all construction sectors combined, Hispanics were over-represented at a rate of 15.5% of skilled craft workers, 11.2% of semi-skilled operatives, and 12.4% of unskilled laborers.

Table 5.14 also provides a “glass ceiling” analysis for Hispanics. Consistent with the standard pattern of diminishing representation of a minority group for occupations in higher-level occupations, the table reveals that Hispanics are a lower proportion of skilled construction workers industry-wide (27.2%) and of semi-skilled workers (27.6%) than of unskilled workers (45.5%).

³² Table 5.13 is excerpted from Appendix Table B.15 in Appendix B.

Table 5.14 ³³
**Utilization of Hispanics in Selected Occupations in the
Construction Industry, 2008, EEO-1 Reports**

(a)	(b)	(c)	(d)	(e)
Occupations	Construction Sector	Actual Hispanics	Expected Hispanics	"Surplus" %
Skilled craft workers	All construction	27.2%	11.6%	15.5%
	Constr. of buildings	27.6%		16.0%
	Heavy construction	25.6%		14.0%
	Specialty trades	27.6%		15.9%
Semi-skilled operatives	All construction	27.6%	16.4%	11.2%
	Constr. of buildings	29.0%		12.6%
	Heavy construction	21.1%		4.7%
	Specialty trades	33.6%		17.2%
Unskilled laborers	All construction	45.5%	33.1%	12.4%
	Constr. of buildings	42.3%		9.2%
	Heavy construction	38.9%		5.8%
	Specialty trades	51.6%		18.5%

Table 5.15 reports EEO-1 data on Hispanics over the 33 year period from 1975 through 2008. It shows that, among all three types of construction workers examined, the utilization of Hispanics in excess of their expected utilization has grown throughout this period, especially in recent years. Between 1975 and 2008, Hispanic "surplus" utilization increased an average of 0.53 percentage points per year for craft workers, 0.38 percentage points for operatives, and 0.50 percentage points for laborers.

The final database examined is the Current Population Survey (CPS). According to CPS data for 2005 through 2009, 10.8% of Hispanics employed in 12 of the most commonly-unionized construction crafts³⁴ are union members or are represented by unions. The counterpart figure for white non-Hispanics working in those same crafts is 27.4%, more than two and a half times the Hispanic rate.

³³ Table 5.14 is extracted from Appendix Table C.5 in Appendix C.

³⁴ These crafts are listed in footnote 11 earlier in this chapter.

Table 5.15 ³⁵
**“Surplus” Utilization of Hispanics in Selected Occupations in
the Construction Industry, 1975-2008, EEO-1 Reports**

Year	Skilled Craft Workers	Semi-skilled Operatives	Unskilled Laborers
1975	0.3%	1.1%	1.3%
1980	0.3%	2.5%	3.1%
1985	0.5%	3.6%	4.1%
1990	1.1%	0.6%	0.9%
1995	2.6%	2.9%	3.1%
2000	6.0%	7.8%	8.2%
2008	17.7%	13.5%	17.7%
Average Annual Rate of Change	+ .53%	+ .38%	+ .50%

Attitudes and Practices Underlying these Outcomes

As with women in Chapter 4, research on psychological and organizational behavior enables us to relate the employment outcomes just described to attitudes and employment practices -- the workplace culture -- in the construction industry. With respect to racial and ethnic minorities, five components of this culture are particularly important.

³⁵ Table 5.15 is extracted from Appendix Table C.9 in Appendix C.

Favoring Insiders over Outsiders

The most fundamental of these components is the practice of making employment decisions in terms of “insiders” and “outsiders” defined by individuals’ demographic characteristics.³⁶ Chapter 4 documented the many ways in which women are considered outsiders throughout the construction industry and are treated worse than men because of their gender.³⁷ The same “insiders over outsiders” thinking tends to shape industry attitudes toward racial and ethnic minorities, although some of the behavior flowing from that thinking may differ.

Because they are the traditional insiders dominating the construction industry as both employers and employees, whites are the main practitioners and beneficiaries of this “protect the insider” way of thinking. The predominant effect is to disadvantage racial and ethnic minorities. As one African American contractor in Southern California recently described his industry:³⁸

It’s still a white world. It’s an industry dominated and controlled by white America. They make the rules....Folks take care of their own.

However, “folks take care of their own” thinking can also be reflected in the behavior of minorities in the industry as well as whites. Research has documented that race, ethnic, and gender “outsider” groups often compete with each other in construction in a “struggle for second place.”³⁹ For instance, one study found that Hispanic contractors in Atlanta shared white contractors’ negative stereotypes about African Americans while African Americans shared with whites anti-immigrant hostility toward Hispanics and fear of them as low-cost competitors.⁴⁰ Another study described how a female apprentice carpenter was consistently rebuffed when she sought support from minority male co-workers; the explanation was that contact with her marked them as double outsiders, first by being nonwhite and then by being affiliated with a woman, a symbol of weakness.⁴¹

In the same spirit, minority groups who gain a toehold in the industry often try to maintain and improve that position against all other groups, both white and minority. For this reason, as well as lack of access to non-ethnic networks, minority groups in the

³⁶ Lippard (2006); Bates (2006); Bonilla-Silva (2003).

³⁷ In that chapter, this process was referred to as “maintenance of social closure” (Murray, 1988; Bendick & Nunes, in press 2011).

³⁸ Equal Rights Advocates (2010).

³⁹ Paap (2006), p. 72.

⁴⁰ Lippard (2006).

⁴¹ Paap (2006), p. 72.

construction industry tend to rely on networks of individuals and firms in their own race or ethnic group for training, financial assistance and connections to work opportunities.⁴² Also consistent with this behavior, Appendix Table B.6 in Appendix B reports that whites are under-utilized in certain construction occupations -- for example, Drywall Installers and Brick Masons -- compared to their expected representation.

When exercised by whites, the most common manifestation of this group-adversarial way of thinking is under-utilization of minority workers.⁴³ That is the predominant pattern documented for African Americans in Tables 5.1, 5.2, and 5.5 for African Americans and 5.6, 5.7, and 5.10 for other racial minorities. It also manifests itself in the “glass ceiling” pattern in which minorities can find work as laborers and helpers but not rise to higher skilled, better-paid positions. This outcome was demonstrated for African Americans, other racial minorities, and Hispanics in Tables 5.3, 5.4, 5.8, 5.9, 5.13, and 5.14, respectively.

The pattern is further demonstrated in Appendix Table B.8 in Appendix B, where average annual earnings are compared for occupations where minorities are “over-represented” and those where they are “under-represented.” For African Americans the few occupations in which they are over-represented -- including Highway Maintenance Workers and Sewer Cleaners -- provide annual earnings that average 89.8% of those where they are under-represented. Similarly, for Hispanics, the two-thirds of occupations in which they are over-represented provide average earnings only 92.4% as high as in the one-third of occupations where they are under-represented.

Another way the group-competitive way of thinking manifests itself is in occupational segregation (sometimes called “glass walls”), where minorities find employment in some construction occupations but not in others at similar levels of skill and pay. One example involves Mohawk Indians who are nationally famous for their work as structural iron workers on skyscrapers and other tall structures.⁴⁴ Consistent with their reputation in this specialized niche, Appendix Table B.4 in Appendix B shows American Indians “over-represented” by 1,676 workers among Iron and Steel Workers nationwide. However, the same table reveals that, concurrently, they are under-represented in 16 other skilled construction occupations.

From an organizational dynamics point of view, both occupational segregation and glass ceilings suggest that when numerical representation of minorities in

⁴² Lippard (2006); Royster (2003); Granovetter (1985).

⁴³ Before the civil rights revolution of the 1960s, under-representation often took the form of complete exclusion of minorities from construction employment, an outcome sometimes referred to as “inexorable zero” (Quadagno, 1994; Hill, 1985). Changing legal requirements and social norms over the past decades have tended to make such instances relatively rare across entire labor markets, although not so rare for individual firms or projects.

⁴⁴ Smithsonian Institution (2004).

construction has increased -- for example, for Hispanics in recent years -- it has done so without fundamental changes in the industry's culture.⁴⁵ In this circumstance, racial and ethnic disadvantage in all its manifestations is unlikely to disappear "naturally" over time without external pressure to foment more fundamental changes. This prediction is consistent with the virtual absence of change over several decades in shortfalls for racial minorities (see Tables 5.5 and 5.10), as well as for women (see Chapter 4).

Under-representation in employment is not the only way that "protect the insiders" thinking is reflected in employment outcomes. An additional manifestation finds minorities employed in construction but on less favorable terms and conditions than their non-minority counterparts. This is especially common among racial/ethnic minorities who are immigrants or are thought of as immigrants.⁴⁶

One form of inequality in the terms and conditions of employment involves differences in compensation for the same work. For example, immigrants might be required to work for less than minimum wage, work overtime without overtime pay, have legally mandated fringe benefits (such as employer's Social Security contributions) not paid, or simply have part of their promised pay not delivered by their employers.⁴⁷

A second form of inequality in employment terms and conditions involves exposure to risks in the workplace. Construction is a dangerous industry, with one of the nation's highest rates of occupational injuries and illnesses and accounting for 20.3% of all occupational deaths.⁴⁸ However, Hispanic construction workers have a work-related death rate 80% higher than their non-Hispanic counterparts.⁴⁹ Fatal injuries involving Hispanics increased nearly 28% from 1996 to 2004, a period in which overall fatality rates declined.⁵⁰ One survey of Hispanic construction workers found that 32% had

⁴⁵ For example, Bates (2006, p. 9) concludes that even though minority presence, particularly Hispanic presence, in Chicago construction has grown rapidly over the years, the existence of progress does not demonstrate "an absence of discriminatory barriers."

⁴⁶ In construction, as elsewhere throughout American society, native-born Hispanic, Hispanics who are naturalized citizens, and Hispanics who are legal residents are often treated as if they were undocumented immigrants. Nearly one in 10 Hispanic adults nationally, both documented and not, reports being questioned about his or her immigration status during a one year period by police or other authorities (Lopez & Minushkin, 2008, p. 9). Consequently, in many circumstances, workplace treatment typical of immigrants often also applies to all Hispanics (Bauer, 2009, p. 5).

⁴⁷ Bauer (2009), chapter 1.

⁴⁸ Brunette (2004), p. 244; Ortega-Wells (2006), p. 1.

⁴⁹ Gittleman (no date), p. 3.

⁵⁰ Brunette (2009), p. 245. Nearly two-thirds of these Hispanic fatalities involved foreign-born workers.

experienced on the job injuries, and among these, only 37% had received appropriate treatment, and many reported being fired because they were injured.⁵¹ In response to such data, the U.S. National Institute of Occupational Safety and Health has declared immigrant construction workers a special needs population facing disproportionate risks.⁵²

Construction employers often can maintain such differences in employment treatment through threats of deportation. In the words of a white contractor in Atlanta recorded in one study:⁵³

[Hispanic workers] are a mixed blessing. Don't get me wrong, they're great. They do s--t work for almost no pay and if they complain, it doesn't matter 'cause I tell them (with an accent), "You complain, I call INS [the Immigration and Naturalization Service]."

The same fear-based disincentives to resist workplace abuse apply to non-Hispanic immigrants, including those from Africa and Asia. Thus, similar abuses help to explain under-representation and mistreatment of other racial and ethnic minority construction employees as well as Hispanics.

Stereotypes

In defending their employment against incursion by minorities, another tool employed by white employment decision-makers and co-workers is stereotypes. As Chapter 4 discussed, stereotypes are over-generalized beliefs that, when they have negative content, can be used to justify not employing individuals.

The predominant content of stereotypes concerning many racial/ethnic minorities is negative. In particular, African Americans are often stereotyped as inferior not only as workers but also as individuals. In addition to presumptions of lack of skills and laziness, they were associated with theft, drug use and immoral conduct.⁵⁴ Reflecting these stereotypes, they were viewed as less desirable to hire, and if hired, less deserving of assistance or mentoring than their white co-workers.⁵⁵

⁵¹ Bauer (2009), p. 6.

⁵² Gittleman (no date), p. 3.

⁵³ Lippard (2006), p. 107. In this study, the direct linkage between abuse of immigrant workers and employers' willingness to hire them is clear from employers' comments that they preferred to hire recent-immigrant Hispanics over "Americanized" Hispanics because the latter group is too "militant" -- that is, prone to demand their rights.

⁵⁴ Moss & Tilly (2001); Waldinger & Lichter (2003).

⁵⁵ Paap (2008), p. 384

In addition to such group-specific stereotypes, racial and ethnic minorities are often stereotyped as less competent because their hiring is associated with affirmative action. In this line of thinking, minority hires are presumed to be affirmative action hires, and affirmative action hires are presumed to lack qualifications. Consistent with such presumptions, many contractors that employ minority workers or subcontractors on projects with affirmative action goals tend not to employ them on non-goal jobs.⁵⁶

The most basic way that stereotypes can adversely affect employment opportunities is in affecting hiring decisions. As Chapter 2 discussed, human resource management practices in the construction industry tend to be simpler and less formal than in many industries. Hiring for on-site construction work is often based on employers' "gut" feeling or "I know it when I see it." In such quick, informal, decision making, stereotypes are particularly influential.⁵⁷

In addition to difficulties getting hires, research has documented a multitude of ways minorities experience stereotype-based adverse treatment in their daily work lives. For example:

- In San Francisco, an African American with a master's degree in construction management is president of a construction services company with annual sales of \$7 million. As he visits job sites in a hard hat supervising his crews, he is often stopped by suspicious security guards and construction supervisors. "They don't expect to see a business owner who's...African American..."⁵⁸
- Performance differences between different categories of workers are "created and recreated...through the public negotiation of blame."⁵⁹ For example, a white employee who makes a mistake is more likely than a minority to be given the benefit of the doubt or have a problem explained as a matter of bad luck rather than lack of skills.⁶⁰ This difference can lead to inappropriately high rates of terminations for minorities.
- A Hispanic contractor reported that an engineer inspecting a project on which he had worked told him that "being a Mexican, I did sh--ty work," and refused to pay him the full, agreed-upon price for his work.⁶¹

⁵⁶ NERA (2006), p. 208; Price (2002).

⁵⁷ Bielby (2008).

⁵⁸ Equal Rights Advocates (2010).

⁵⁹ Paap (2008), p. 383.

⁶⁰ Paap (2008), Chun et al. (2009).

⁶¹ DCA (2005).

- A minority contractor reported that city inspectors asked his white employees “why they were working for a Black-owned firm.”⁶²
- Concerning interviews for the work-study program at a vocation high school in Baltimore, a school counselor stated that she had “sent several [black] students on interviews where they came back and said, “They took one look at me and it was over.” One student said they kept him waiting an hour, then told him that there was no one there who could interview him.⁶³
- In Atlanta, research found that contractors often used different metrics when considering if whites, African Americans, and Latinos should be used as subcontractors. Their decisions were often based directly on stereotypes that African Americans are not competent, and Hispanics’ main advantage is that they are cheap.⁶⁴

While all stereotypes are inaccurate when applied to individuals, they are not all negative. For example, the prominence of Mohawk Indians among Structural Iron and Steel Workers, mentioned earlier, is based in part on the stereotype that they are not afraid of heights.⁶⁵

However, although positive stereotypes may expand some types of minority employment, they often do so in a discriminatory way. For example, Hispanic immigrant construction workers are often described as hungry for work and docile, so that they will accept low wages, not complain or talk back to supervisors, not take too many breaks, not leave work undone, and not refuse work if it is unsafe.⁶⁶ These stereotypes encourage employers to employ them in jobs where these supposed extra qualities are most advantageous -- such as the most dangerous jobs or the ones with lowest pay -- but not elsewhere. Thus, ironically, these “positive” stereotypes simultaneously limit opportunities for both non-Hispanics (by displacing them from such jobs) and Hispanics (by confining them to those jobs).

Networks

Another very important aspect of construction in which distinctions between insiders and outsiders translate into employment under-utilization for minorities is access

⁶² NERA (2006), p. 206.

⁶³ Royster (2003), p. 115.

⁶⁴ Lippard (2006), p. 318.

⁶⁵ Smithsonian Institution (2004).

⁶⁶ Lippard (2006); Waldinger & Lichter (2003); Moss & Tilly (2001).

to networks. In construction, access to information and referrals through networks of personal contacts is a major resource. Without equal access to those networks equal employment outcomes remain extremely unlikely.⁶⁷

The dominance of whites in such networks has been documented in a number of research studies. In the Chicago labor market, for example, one study concluded that the dominant explanation for “persistent minority disadvantage in construction” was an “old boys network” that allowed a white male, entrenched group to enjoy the benefits of insider status. Minorities, on the other hand, were considered newcomers and “outsiders” and not allowed access to the networks providing access to construction jobs of all types.⁶⁸ In Atlanta, white networks were tied into “every part of the industry including the banks, the supply warehouses, and the local municipalities that inspected their work.”⁶⁹

Whites in such positions of power often use these networks to assist insiders and exclude outsiders at a number of key “choke points.”

In one important choke point, personal networks are often crucial sources of information about job openings, as well as referrals and recommendations to potential employers. One study found that referrals from friends and relatives were associated with a more than tripling of the probability of being employed in the construction industry.⁷⁰ Even when they literally know each other, whites may not share information with minorities and instead reserve it for friends, family, and neighbors. As one team of researchers summarized it, “Family ties and long-standing tradition remains strong in the trades, and the gateway to entry is patrolled by insiders who are suspicious of change.”⁷¹

Because of segregated residential patterns and family relationships, minorities often have limited access to individuals who themselves have succeeded in construction, are confided in by bosses about unadvertised job vacancies, and whose recommendations are listened to. Thus, for example, among young jobseekers in Boston, whites obtaining jobs through their relatives earned 38% more per hour than did African Americans finding jobs through their relatives.⁷²

⁶⁷ Bates (2006), p. 8-9; Lippard (2006); Waldinger & Bailey (1991), p. 298.

⁶⁸ Bates (2006), p. 8-9

⁶⁹ Lippard (2006).

⁷⁰ Korenman & Turner (1996).

⁷¹ Price (2002), p. 102. See also Bates & Howell (1998) and Waldinger & Bozogmehr (1996).

⁷² Korenman & Turner (1996). See also Waldinger & Bailey (1991), Bates & Howell (1998), and Silver (1986).

Personal networks are often particularly important in providing information about job opportunities outside workers' home neighborhoods. As Chapter 7 will discuss, construction workers routinely commute long distances to work sites. However, they must first be aware of those opportunities. Lack of information-sharing relationships with white workers is commonly cited as one mechanism underlying low minority presence in construction projects in suburban areas. For example, a study of construction employment in the Milwaukee metropolitan area found that African Americans and Hispanics gained employment primarily from the growth in construction work in Milwaukee County, while their white counterparts were employed at worksites throughout the four-county metropolitan area. The largest construction projects in the city of Milwaukee showed 17% to 21% minorities in their workforce, while the largest in adjacent, suburban Waukesha County showed between 2% and 9%.⁷³

Referrals through personal contacts can be particularly important at the start of careers. A study of African American and white vocational high school students in Baltimore concluded that, in facilitating transitions from school to work in the construction trades, no group is as influential as older white men. "[Young] white men's networks connect them with desirable training and occupational options, which remain open even while they pursue other objectives or simply fool around. Black men lack similar options, and instead exhaust the usefulness of their limited networks in the first few years out of high school."⁷⁴

As Chapter 2 discussed, apprenticeships are an important pipeline into better-paid construction crafts. Therefore, admissions to, and graduation from, these programs is another important "choke point." Holding information close about when and how to apply, supplying personal introductions in the admission process, and providing encouragement and tips throughout training are important ways that personal contact networks can enhance access to apprenticeships and success in the programs.

The experience of African Americans in the Milwaukee area illustrates their typically limited access to construction apprenticeships. Among the 341 Milwaukee area union contractors offering these programs, two-thirds had zero African American apprentices in both 2007 and 2010. In addition, among African Americans who registered for apprenticeships in 2007, 52% had been cancelled before the end of the year, compared to a white cancellation rate of 24%. In 2010, 14% of the African

⁷³ ETI (2006).

⁷⁴ Royster (2003), p. 147. With respect to high school shop teachers, the study found that white teachers were not uniformly helpful to white students or uniformly hostile to black students. Instead, they were to some degree supportive of both groups. Nevertheless, there was discernable inequality in the efforts the teachers made to assist white and black students.

American apprentices remained unassigned, compared to 9% of their white counterparts.⁷⁵

Personal relationships among workers can also affect informal training on the job. One research study described how this process can limit employment opportunities for minorities as follows:⁷⁶

In addition to workplace hostilities and what clearly seemed to be racist slander, I also observed clear differences in the informal interactions between the black and white male workers. Informal interactions are significant, of course, because they are the vehicle through which “tricks of the trade” and insider information about getting on steady with the company are communicated. I never witnessed black male workers being given the kind of mentoring or personal on-the-job training that could make the difference between a decent worker and a good or great worker.

Another key point of access to employment opportunities is decisions by prime contractors about subcontractors and joint venture partners. Here again personal introductions and references can play a crucial role, and minorities typically get fewer opportunities than equally qualified white counterparts. Analyzing the attitudes underlying such outcomes, one study of contractors in Atlanta found that whites generally viewed Hispanics and African Americans as acceptable in subcontractors and laborer roles but not as equal partners or general contractors. In addition, white contractors were leery of offering higher-level opportunities to Hispanics out of a concern that they would use the experience to transform themselves into competitors.⁷⁷

Research on contractor-subcontractor relationships in Chicago documented the same pattern of minorities being admitted only to limited opportunities. Consistent with Chapter 2 of the present report, this study emphasized contractors’ desire to avoid risk when selecting subcontractors and employees, with consequent avoidance of minorities because their competence, trustworthiness, and credibility are perceived as uncertain. In addition, white members of insider networks felt that they could function smoothly together based on pre-established trust, prior experience with each other, and “social comfort” with people like themselves. As this study expressed it:⁷⁸

⁷⁵ NAACP & ETI (2010), pp. ii-iv. Another study found that, nationwide, 28% of minority apprentices and 25% of female apprentices completed their programs, compared to an overall rate (primarily based on white males) of 37% (Glover & Bilginsoy, 2005, p. 342).

⁷⁶ Paap (2006), p. 61.

⁷⁷ Lippard (2006), p. 318.

⁷⁸ Bates (2006), p. 19.

A prime contractor taking a chance by employing an outsider runs the risk of disrupting the job, falling behind, undermining the ability of other subcontractors to complete their work in a timely fashion. Utilizing one minority subcontractor may antagonize the other subs working on the job. Why take the risk?

This same study quantified the advantage conferred by such insider status in terms of higher rates of business ownership, greater access to work, and higher earnings. Among workers in the skilled construction trades, a combination of lower wage rates and fewer hours meant that Hispanic construction workers earned an average of 65.5% as much as whites, and African Americans 73.1% as much as whites, among workers with the same qualifications.⁷⁹

A final chokepoint is approval of construction work by inspectors. Here, disapproval of work can mean costly “do-overs,” delays in payments causing cash flow problems for firms, or, at the least, energy-draining disputes. Research has documented examples of hostile behavior by inspectors such as the following:

- One African American with more than two decades’ experience in residential construction in Atlanta reported: “I have this building here that has failed inspection twice, even though I have met all the requirements. I have a white inspector, and I don’t think he agrees with a black person building in this area of Atlanta. Don’t know if that is true, but I can tell because he just doesn’t want to answer any of my questions and never will meet with me.”⁸⁰
- A different study described the process as some public agencies’ “leaning harder” on minority contractors, sending the covert message: “If you want to play in this league, we’re going to make you pay.” “Some agencies are really good to work for, but... others...don’t think you belong.”⁸¹
- A minority contractor described excessive oversight from city inspectors, including being bombarded with more than 300 letters identifying worksite violations.⁸²

Hostility, Harassment and the Lack of Help

A fourth component of the construction industry’s culture maintaining differences in employment opportunities for whites and racial/ethnic minorities is hostile, harassing,

⁷⁹ Bates (2006), p. 13.

⁸⁰ Lippard (2006), p. 86.

⁸¹ Equal Rights Advocates (2010), p. 1.

⁸² NERA (2006), p. 206.

and unhelpful behavior by supervisors and co-workers on construction worksites. In recent years, some of this discriminatory treatment has become less explicit and more subtle, while other behavior has remained as explicitly hostile as in earlier decades.⁸³ However, in both forms, this behavior continues to be a common reality for “outsider” racial/ethnic minorities in the construction industry.

One indication of this fact is the ongoing flow of discrimination charges filed with the EEOC for which the agency “found cause.” According to Appendix Table D.1 in Appendix D, more than 350 such charges based on race, color, or national origin in the construction industry have flowed into the agency throughout the most recent five years, including nearly one found-cause charge a week during the first half of 2010.

Table 5.16 provides 28 examples of hostile or harassing behavior against minority workers or prospective workers in the construction industry documented in employment discrimination litigation within the past five years. Many of these examples feature racial/ethnic epithets, graffiti, comments, and slurs and their role in creating a work environment hostile to racial minorities and Hispanics. Nooses, a recognized symbol of racial hatred and violence because of their associations with African American lynchings, are particularly prominent. Other examples document discriminatory treatment in hiring, job referrals, terminations, and pay and cover racial and ethnic groups including African Americans, Hispanics, and Asians.

When such problems of discrimination are reported to public anti-discrimination agencies or documented in litigation, it often signals failure of individuals or institutions to respond to the issue at an earlier, more resolvable stage. Assistance to victims of such discrimination might be provided by project managers or other supervisors at the construction site, human resource officials of the employing firms, owners of the construction project and their on-site representatives, or shop stewards and other union officials. However, in practice, individuals experiencing harassment or discrimination often find that these actors do not address their issues either proactively or in response to complaints. Instead, officials themselves are sometimes active participants. Table 5.17 provides 12 examples from recent litigation of failures of these “official” mechanisms to protect minority construction workers.

⁸³ On “subtle” or “modern” racism, see Dipboye & Collela (2005) and Jones (1996); One 21-year African American veteran of residential construction in Atlanta described this evolution as follows (Lippard, 2006, p. 86):

So, I’ve seen it go from hardcore racism, what we have now is subtle racism. Yeah, so, they both have the same impact. ... It’s just sneakier, I would rather he go ahead and call it what it really is, “I’m black.”

Table 5.16 ⁸⁴
28 Examples from Recent Litigation of Racial/Ethnic
Discrimination in Construction Workplaces

(a) Year	(b) Finding	(c) Case
2005	-- A Wisconsin general contractor and a Pennsylvania sheet metal subcontractor settled a lawsuit alleging that Black employees were subject to racial graffiti and abusive and racially derogatory language, and were given the most dangerous job assignments.	(10)
2006	-- A Tennessee general contractor settled a lawsuit alleging that Black carpenters and laborers were wrongfully terminated and replaced by Hispanics.	(6)
	-- A Maryland construction firm settled a lawsuit alleging that Black employees were subjected to racial epithets, slurs, and comments and given less favorable terms and conditions of employment.	(9)
	-- A California construction firm settled a lawsuit alleging that Thai welders were not paid the prevailing wage and were subjected to other exploitation and discrimination.	(15)
	-- A Michigan construction firm settled a lawsuit alleging that the company failed to hire and terminated Black iron workers because of their race.	(25)
2007	-- A Texas construction firm settled a lawsuit alleging that a Black sheet metal worker was subjected to racist remarks on a daily basis.	(30)
	-- A New York local of a construction union settled a contempt action alleging that, in violation of a previous court order, the union refused to refer non-White journey workers on the same basis as Whites.	(12)
	-- A New York highway construction firm settled a lawsuit alleging that over six years it repeatedly failed to hire a certified African American operating engineer.	(16)
	-- The New York Commission on Human Rights found that a construction firm discriminatorily terminated a Black demolitionist.	(48)
2008	-- A Pennsylvania general contractor and several subcontractors settled a lawsuit alleging that Black employees were subjected to racial slurs, graffiti, and nooses.	(11)
	-- A Massachusetts construction firm settled a lawsuit alleging that Black employees were subjected to racially offensive language, graffiti, and harassment.	(13)
	-- A Pennsylvania construction firm settled a lawsuit alleging that a Black pipe layer was laid off and not recalled while White workers were recalled or hired.	(31)
	-- An OFCCP compliance evaluation found that a Tennessee paving contractor failed to hire 76 qualified Black laborers.	(44)
	-- The Massachusetts Commission Against Discrimination found that a site superintendent's racial epithets created a hostile and abusive work environment for a Black equipment operator.	(28)

⁸⁴ Table 5.16 is excerpted from Appendix Table D.2 in Appendix D. “Case” refers to the case number in that table.

	-- An Illinois construction firm settled a lawsuit alleging that non-white Hispanic workers were routinely subjected to derogatory language and graffiti.	(17)
	-- An Arizona construction firm settled a lawsuit alleging that Mexican American employees were subject to anti-Hispanic slurs on a daily basis.	(4)
	-- The New Jersey Division on Civil Rights found probable cause to believe that a renovation firm subjected a Black carpenter to a racially hostile work environment.	(41)
	-- An Illinois construction firm settled a lawsuit alleging that Black employees were laid off after brief employment while white employees were retained.	(1)
	-- A union settled a lawsuit alleging that it denied a Black electrician membership and job referrals while admitting and referring 19 new white members.	(47)
	-- A Florida plumbing, air conditioning and heating contractor settled a lawsuit alleging that 12 minority helper, service, and insulation employees were paid less than similarly situated non-minorities.	(43)
	-- An OFCCP compliance evaluation found that a Maryland general contractor subjected a Black employee to supervisors' and co-workers' use of racially derogatory terms, verbal and written racial slurs, and nooses.	(45)
	-- A Florida construction firm settled a lawsuit in which a Black employee alleged that White employees put a noose around his neck and locked him in a tool shed.	(2)
2010	-- A Texas construction firm settled a lawsuit alleging harassment of East Indian, Black, and Hispanic workers.	(14)
	-- A Missouri construction firm settled a lawsuit alleging that three Black construction workers were subjected to racially charged comments and a noose.	(35)
	-- A Minnesota drywall firm settled a lawsuit alleging that it paid Hispanic immigrant workers less than their white co-workers through withholding fringe benefits and failing to pay overtime rates.	(37)
	-- An Ohio court denied summary judgment in a lawsuit alleging that the employees of an Ohio pipeline construction firm created a hostile work environment for Black equipment operators, welders, teamsters, and laborers through nooses, racial epithets, and other racially offensive behavior.	(40)
	-- An OFCCP compliance evaluation found that a Virginia general contractor paid minority carpenters less than similarly situated non-minorities.	(46)

Table 5.17 ⁸⁵
12 Examples from Recent Litigation of Officials' Failing
to Assist Construction Workers Experiencing
Racial/Ethnic Discrimination or Harassment

(a)	(b)	(c)
Year	Finding	Case
2005	-- A Wisconsin general contractor and a Pennsylvania sheet metal subcontractor settled a lawsuit alleging that Black employees were subjected to abusive and racially derogatory language by supervisory personnel.	(10)
2006	-- The Seventh Circuit held a union local liable for not acting when master mechanics refused to provide on-the-job training for Black union members seeking to become licensed elevator mechanics.	(34)
	-- The Eighth circuit upheld a district court finding that a foreman's racial insults created a hostile work environment for Black utility pole treatment workers.	(39)
2007	-- The West Virginia Human Rights Commission found that a construction firm did not take action to remedy co-workers' harassment of a minority laborer and instead fired the complaining employee.	(50)
2008	-- The Massachusetts Commission Against Discrimination found that a subcontractor ignored complaints by a Black equipment operator about offensive racial epithets by the general contractor's site superintendent, and then terminated the employee after he filed a complaint with the Commission.	(28)
	-- A Massachusetts construction firm settled a lawsuit alleging that it retaliated against Black workers who complained about racially offensive language and other harassment.	(13)
2009	-- The Massachusetts Commission Against Discrimination found that a building firm tolerated racial comments against a Black worker, and transferred and terminated him when he filed a complaint with the Commission.	(27)
	-- An Arizona construction firm settled a lawsuit alleging that it terminated Mexican American employees who complained about anti-Hispanic slurs.	(4)
	-- An OFCCP compliance evaluation found that a Maryland general contractor did not recall a Black laborer from layoff and did not rehire him because he complained about racial slurs and nooses and notified the company that he was filing a discrimination complaint.	(45)
	-- An Illinois construction firm settled a lawsuit alleging that a Black employee was terminated after filing a race discrimination complaint.	(1)
2010	-- A Florida construction firm settled a lawsuit alleging that it promoted a White employee who put a noose around the neck of a Black employee.	(2)
	-- A Missouri construction company settled a lawsuit alleging that three Black workers were no longer sent out on jobs after they complained about racially charged comments and a noose.	(35)

⁸⁵ Table 5.17 is excerpted from Appendix Table D.2 in Appendix D. "Case" refers to the case number in that table.

Denial of Problems

The fifth and final component of the construction industry's culture regarding discrimination is reluctance by non-minority participants in the construction industry to acknowledge employment discrimination as a widespread or serious problem in their industry. In the absence of agreeing that there is a problem to solve, employers and others in positions of power see little reason to change current employment practices, which they consider appropriate and effective.

Asked about situations such as the racial slurs, graffiti, and nooses illustrated in Tables 5.16, non-minority participants in the industry often characterize such incidents as rare and isolated. They also often judge the matter to be less serious than the minorities involved perceive them ("just harmless joking") or characterize complainants as "overly sensitive."⁸⁶

These non-minorities also tend to resist interpreting low minority representation in employment as under-utilization compared to reasonable benchmarks of expected representation. They commonly describe employment decisions by construction employers as "color blind" and motivated by legitimate desires to minimize risk, maximize employee productivity, and stay on top of their competition. In that context, they attribute low minority numbers in construction occupations to minorities' lack of preparation, aptitude, or interest. Similarly, decisions by white prime contractors not to offer opportunities to minorities beyond very limited roles are defended on grounds that minorities "have not yet paid their dues," "have not worked their way up the ladder," and are not yet "ready."⁸⁷

⁸⁶ Papp (2008); Moccio (2009).

⁸⁷ Lippard (2006), p. 107.

Chapter 6

A New Methodology for Calculating Availability

By documenting significant discrimination against both women and minorities, Chapters 4 and 5 imply that the availability of these groups for on-site construction occupations cannot be estimated accurately from current employment in those occupations alone. Instead, measures of availability should also take account of qualified and interested workers and potential workers currently employed outside the industry's employment-limiting workplace culture. This chapter presents a methodology for doing so in a systematic, empirical manner.

This methodology involves two different databases. First, the U.S. Department of Labor's O*NET is used to identify occupations sufficiently similar to on-site construction to be included in computing availability. Then, the U.S. Census Bureau's American Community Survey 2006-2008 is used to measure the demographic composition of the workforce in this broader set of construction-relevant occupations. This chapter first describes the former analysis and then the latter.

Identifying Similar Occupations

The Occupational Information Network (O*NET) is a large database detailing occupational requirements and worker attributes for individual occupations.¹ It and its on-paper predecessor *Dictionary of Occupational Titles* have been developed and refined over several decades with support from the U.S. Department of Labor's Employment and Training Administration (ETA). The database is publicly available to persons seeking detailed information on occupations, including employers, educational institutions, vocational counselors, job seekers, human resource professionals, providers of employment and training services, and researchers. With its 15th version released in 2010, the O*NET database is both up-to-date and well established.

For each occupation it covers, O*NET provides consistently-measured descriptors of:²

- Worker characteristics (abilities, occupational interests, work values, and work styles);

¹ O*Net Data Resource Center (2010C) and O*Net Data Resource Center (2010E) provide additional information. The database itself is available at O*Net Data Resource Center (2010D), and its data dictionary is available at O*Net Data Resource Center (2010B).

² O*Net Data Resource Center (2010A).

- Worker requirements (skills, knowledge, education);
- Experience requirements (experience, training, skills, entry-level requirements, licensing);
- Occupational requirements (work activities, organizational context, work context);
- Workforce characteristics (labor market information, occupational outlook); and
- Occupational-specific information (tasks, tools and technology).

The range of these data, and the systematic processes through which they have been developed, makes O*NET uniquely appropriate for identifying occupations employing workers with abilities and interests similar to those in on-site construction occupations.

This identification process involved four steps.

Step One: Eliminate Irrelevant Occupations. O*NET currently provides complete data on 853 occupations,³ ranging from high-level managerial and professional fields (e.g., Chief Executive Officers and Surgeons) to low-paid, high-turnover occupations with few educational or skill prerequisites (e.g., Dishwashers and Poultry Trimmers). Construction occupations fall within a “middle range” between these extremes. Many non-construction occupations differ so substantially from on-site construction that they are irrelevant to our analysis. Accordingly, the first step in this analysis was to eliminate occupations falling outside four broad screening criteria:

1. Education. All occupations analyzed in O*NET are assigned to one of five “Job Zones” based on the level of education required to perform the occupation. O*NET assigns all the on-site construction occupations it analyzes to Zones 1 (less than high school graduate), 2 (high school graduate), or 3 (some post-secondary training or education). Therefore, we eliminated all occupations falling into O*NET Zones 4 (four year college degree) or 5 (graduate degree).
2. Strength. O*NET provides four descriptors of the physical strength required of workers in an occupation -- static strength, dynamic strength, explosive strength, and trunk strength⁴ We averaged these four into a single strength score. Among

³ Within O*NET, occupations are defined in terms of O*NET codes and titles, which are more detailed than SOC (Standard Occupation Code) codes and titles, which, in turn, are more detailed than Census occupation codes and titles. Relationships among these classification systems are documented at National Crosswalk Service Center (2010). Throughout this report, analyses use the most detailed level of occupations for which data are available and therefore may vary among analyses.

⁴ O*NET measures each type of strength on a numerical scale with examples defining the levels (e.g., static strength level 6 corresponds to lifting 75 pound bags of concrete onto a truck). The

on-site construction workers, one of the lowest average strength score is .224, for Operating Engineers. Therefore, we eliminated all occupations not requiring at least that strength.

3. Working Conditions. For each occupation it analyzes, O*NET measures the frequency of exposure to 12 difficult work conditions or job hazards, including noise, heights, hazardous machinery, heat or cold, environmental contaminants, and cuts or burns. We computed an average score for these 12 scales. Among on-site construction occupations, the lowest score on this average is for Helpers of Painters, Paperhangers and Stucco Masons, corresponding to an average frequency of exposure to one of these conditions at least once a month. Therefore, we eliminated all occupations with a lower average frequency of exposure.
4. Earnings. Workers are much less likely to be available for construction employment if their employment alternatives pay substantially more than construction work. In the American Community Survey 2006-2008, the highest-earning on-site construction occupation is Elevator Installer and Repairer, with average annual earnings of \$64,149.⁵ Therefore, we eliminated all occupations for which average annual earnings in that survey were higher than that figure.

After these criteria were applied, 301 occupations (35.3%) of the original 853 remained. These remaining occupations consisted of 45 on-site construction occupations and 256 other “blue collar” occupations such as: Automotive Body Repairers, Farmers and Ranchers, Home Appliance Repairers, Heavy Truck and Tractor Trailer Drivers, Machinists, Municipal Firefighters, Machine Assemblers, Postal Service Mail Carriers, Tree Trimmers, Tire Repairers, and Welders.

Step Two: Measure Similarity of Occupations. The next step was to quantify the similarity among these 301 occupations. To do so, we first described each occupation using the 43 descriptors listed in Table 6.1. These descriptors incorporate all data in the O*NET “Worker Characteristics” file, including physical abilities, cognitive skills, vocational interests, and additional worker characteristics ranging from leadership ability to stress tolerance. Thus, our measure of occupational similarity focuses on the degree to which persons currently employed in occupations resemble each other in terms of job-relevant abilities, skills, and interests.

occupations with the lowest strength scores are office jobs such as Auditors and Sales Managers, while those with the highest score include Athletes, Dancers, and Aerobic Instructors. The on-site construction occupation with the highest strength requirement is Brick Masons.

⁵ Here, we computed annual earnings excluding negative earnings.

Table 6.1
O*NET Data Elements in the Measure
of Distance between Occupations

(a)	(b)
Item	O*NET Data Elements Averaged to Create this Item
1 Verbal ability	Verbal - oral comprehension (level) Verbal – Written comprehension (level) Verbal - Oral expression (level) Verbal – Written expression (level)
2 Reasoning	Ideas/reasoning - fluency of Ideas (level) Ideas/reasoning - originality (level) Ideas/reasoning - problem sensitivity (level) Ideas/reasoning - deductive reasoning (level) Ideas/reasoning - inductive reasoning (level) Ideas/reasoning - information gathering (level) Ideas/reasoning - category flexibility (level)
3 Quantitative ability	Quantitative - mathematical reasoning (level) Quantitative - numerical facility (level)
4 Memory	Memory - memorization (level)
5 Perceptual ability	Perceptual - speed of closure (level) Perceptual - flexibility of closure (level) Perceptual - perceptual speed (level)
6 Spatial ability	Spatial –spatial orientation (level) Spatial – visualization (level)
7 Attentiveness	Attentiveness - selective attention (level) Attentiveness - time sharing (level)
8 Fine manipulation	Fine manipulation - arm-hand steadiness (level) Fine manipulation - manual dexterity (level) Fine manipulation - finger dexterity (level)
9 Physical control	Control - control precision (level) Control - multilimb coordination (level) Control - response orientation (level) Control - response control (level)
10 Reaction time	Reaction time - reaction time (level) Reaction time - wrist-finger speed (level) Reaction time - speed of limb movement (level)
11 Strength	Physical strength - static strength (level) Physical strength - explosive strength (level) Physical strength - dynamic strength (level) Physical strength - trunk strength (level)
12 Endurance	Endurance - stamina (level)
13 Flexibility/coordination	Flexibility/coord. - extent flexibility (level) Flexibility/coord. - dynamic flexibility (level) Flexibility/coord. - gross body coordination (level) Flexibility/coord. - gross body equilibrium (level)
14 Visual acuity	Visual - near vision (level)

	Visual - far vision (level)
	Visual - color discrimination (level) Visual - night vision (level) Visual - peripheral vision (level) Visual - depth perception (level) Visual - glare sensitivity (level)
15 Auditory acuity	Auditory - hearing sensitivity (level) Auditory - auditory attention (level) Auditory - sound localization (level) Auditory - speech recognition (level) Auditory - speech recognition (level)
16 Realistic interests	Realistic (scale)
17 Investigative interests	Investigative (scale)
18 Artistic interests	Artistic (scale)
19 Social interests	Social (scale)
20 Enterprising interests	Enterprising (scale)
21 Conventional interests	Conventional (scale)
22 Achievement values	Achievement
23 Working conditions values	Working conditions
24 Recognition values	Recognition
25 Relationships values	Relationships
26 Support values	Support/supervision
27 Independence values	Independence
28 Effort	Achievement orientation - achievement/effort
29 Persistence	Achievement orientation - persistence
30 Initiative	Achievement orientation - initiative
31 Leadership	Social influence – leadership
31 Cooperation	Interpersonal orientation – cooperation
33 Concern for others	Interpersonal orientation - concern for others
34 Social orientation	Interpersonal orientation - social orientation
35 Self control	Adjustment - self control
36 Stress tolerance	Adjustment - stress tolerance
37 Adaptability	Adjustment - adaptability/flexibility
38 Dependability	Conscientiousness – dependability
39 Attention to detail	Conscientiousness - attention to detail
40 Integrity	Conscientiousness – integrity
41 Independence values	Independence
42 Innovation	Practical intelligence - innovation
43 Analytical thinking	Practical intelligence - analytical thinking

We then computed a number representing the degree of dissimilarity among the 301 occupations. We refer to this measure as a “distance” because it is computed using the “Minkowski Distance” procedure.⁶ This is the same methodology used by O*NET staff in measuring occupational similarity.

To understand that distance number, consider the example of Construction Carpenters, reported in Table 6.2. By definition, every occupation is identical to itself, so the distance between Construction Carpenter and itself is .000. The occupation next most similar to Construction Carpenter is Rough Carpenter, a distance of .063 away. The non-construction occupation most similar to Construction Carpenters is Electrical and Electronics Repairers of Commercial and Industrial Equipment, at a distance of .080. The occupation that is furthest away from Carpenters but still close enough to appear in Table 6.2 is the manufacturing occupation of Drilling and Boring Machine Operators, at a distance of .110.⁷

Step Three: Determine Minimum Similarity. Next, we determined a cutoff for occupations sufficiently similar to a construction occupation to be utilized in computing availability.

To do so, we first computed the distance from each of the 45 construction occupations to all other construction occupations. We then computed the median⁸ of those distances, which is .116, representing the similarity between Floor Layers and Glaziers. Then, in analyzing each construction occupation, we excluded all occupations more than .116 away from that construction occupation. Accordingly, all occupations remaining in the analysis for each construction occupation were at least as similar to that occupation as construction occupations are “typically” similar to each other.

⁶ A formal definition of the Minkowski Distance is available at U.S. National Institute of Standards and Technology (2010). In the version applied in our analysis, it is the straight line (“Euclidian”) distance between each pair of occupations. It is computed by calculating the numerical difference in scores between each pair of occupations on each of the 43 descriptors, squaring each difference, summing these squared numbers, and taking the square root of that sum.

⁷ To place these distance figures in perspective, consider the largest distance between any pair of occupations among all 301 “blue collar” occupations considered in our analysis. This distance is .372, and it is the distance between the two highly dissimilar occupations of Farm Laborers and Critical Care Nurses.

⁸ The median is the number in a list where half the list falls above it and half below it, and it is commonly used to identify a “typical” value in a list of values. Thus, the distance between pairs of construction occupations that is the median distance among all construction occupation pairs identifies a pair of occupations -- here, Floor Layers and Glaziers -- that are a “typical” distance apart. In computing the median, we conservatively included the zeros for the distance of each occupation from itself.

Table 6.2
50 Occupations Less Distant from Construction Carpenter
than the Distance between the Median Pair of
On-Site Construction Occupations

	Occupation	Distance
(1)	Construction carpenters	0.000
(2)	Rough carpenters	0.063
(3)	Brickmasons & blockmasons	0.077
(4)	Electrical & electronics repairers, commercial	0.080
(5)	Industrial machinery mechanics	0.081
(6)	Drywall & ceiling tile installers	0.082
(7)	Plumbers	0.082
(8)	Heating & air conditioning mech. & installers	0.085
(9)	Electricians	0.087
(10)	Electrical power-line installers & repairers	0.089
(11)	Farm equipment mechanics	0.090
(12)	Forest & conservation workers	0.091
(13)	Maintenance & repair workers, general	0.092
(14)	Machinists	0.093
(15)	Surveying technicians	0.093
(16)	Aircraft mechanics & service technicians	0.094
(17)	Home appliance repairers	0.095
(18)	Automotive master mechanics	0.095
(19)	Model makers, wood	0.096
(20)	Lay-out workers, metal & plastic	0.096
(21)	Truck drivers, heavy & tractor-trailer	0.097
(22)	Pipe fitters & steamfitters	0.098
(23)	Chemical plant & system operators	0.098
(24)	Tool & die makers	0.098
(25)	Signal & track switch repairers	0.099
(26)	Mobile heavy equip. mechanics, ex. Engines	0.099
(27)	Maintenance workers, machinery	0.100
(28)	Woodworking machine operators, ex. Sawing	0.100
(29)	Electric motor & power tool repairers	0.101
(30)	Job printers	0.101
(31)	Water waste treatment plant operators	0.102
(32)	Cooling & freezing equip. operators	0.102
(33)	Millwrights	0.102
(34)	Motorboat mechanics	0.103
(35)	Telecom. equip. installers & repairers, ex. Line	0.103
(36)	Patternmakers, metal & plastic	0.104
(37)	Crushing, grinding & polishing machine operators	0.104
(38)	Elevator installers & repairers	0.104
(39)	Electrical & electronics repairers, powerhouse	0.104
(40)	Separating & filtering machine operators	0.105
(41)	Manufacturing production technicians	0.106
(42)	Fiberglass laminators & fabricators	0.107
(43)	Structural iron and steel workers	0.107
(44)	Patternmakers, wood	0.107
(45)	Mechanical engineering technicians	0.108
(46)	Insulation workers, mechanical	0.108
(47)	Explosives workers, ordnance handling experts & blasters	0.109
(48)	Medical equipment repairers	0.109
(49)	Electronic equipment installers & repairers, motor vehicles	0.109
(50)	Drilling & boring machine operators, metal and plastic	0.110

Step Four: Limit the number of similar occupations. Among the 45 construction occupations analyzed in O*NET, the number of “sufficiently similar” occupations ranged

from 17 (for Construction & Building Inspectors) to 131 (for Boilermakers). To be conservative, we considered only the 50 occupations most similar to each construction occupation. In the case of Carpenters, for example, that reduced the number of occupations considered similar to Carpenters from 65 to 50 and thereby further reduced the distance any included occupation was from Construction Carpenter, from .116 to .110.

Table 6.3 provides examples of the occupational matches that emerged from this four-step process. Overall, 44.4% of the occupations selected as similar to on-site construction occupations are other construction occupations. For example, Table 6.3, the occupation most similar to Construction Laborers is Helpers-Brick, Block and Stone Masons, and the occupation most similar to Painters is Glaziers.

In the remaining 55.6% of matches, the occupations identified as similar to a construction occupation is a “blue collar” field outside construction -- for instance, the match of construction Pipelayers, Plumbers, Pipefitters & Steamfitters to non-construction Derrick Operators - Oil and Gas. Many of the matches are to semi-skilled and skilled positions in manufacturing -- for example, the match of Construction Carpenters to Millwrights. Still other common matches are to installation and repair occupations -- for instance, the match of Electricians to Installers/Repairers of Heating and Air Conditioning Systems. Thus, most matches have considerable “face validity” -- that is, they appear readily understandable and reasonable.

To understand the matching process fully, however, it is useful to examine matches that, at first appearance, might seem less plausible than the examples in the previous paragraph. For example, consider the match in Table 6.3 of the Pipelayers, Plumbers, Pipefitters & Steamfitters to Forest & Conservation Workers. How could there be a high degree of similarity between persons whose working lives are spent under kitchen sinks and those whose working lives are spent in wilderness? The answer is that, despite such obvious differences in working conditions, O*NET reports that workers in these two occupations are:⁹

- identical in 3 characteristics: Realistic Interests, Support Values, and Concern for Others;
- highly similar in 16 characteristics: Verbal Ability, Quantitative Ability, Memory, Perceptual Ability, Physical Control, Physical Strength, Endurance, Visual Acuity, Auditory Acuity, Initiative, Leadership, Cooperation, Self Control, Dependability, Integrity, and Stress Tolerance; and

⁹ The characteristics discussed here are those listed in Table 6.1. In this comparison, we define “identical” as a distance of .00, “highly similar” as a distance of < .05, and “generally similar” as a distance between .05 and < .11.

Table 6.3¹⁰
Examples of Occupations among the Occupations Selected
as Similar to Ten Large On-site Construction Occupations

(a)	(b)	(c)	(d)
Construction Occupation	Occupation at the Smallest Distance	Occupation at the Median Distance	Occupation at the Largest Distance
Construction laborers	Helpers—brick, block, stone & tile/marble	Telecommunications line installers	Operating engineers & other constr. equip. operators
Construction carpenters	Rough carpenters	Millwrights	Sheet metal workers
Painters, construction & maintenance	Glaziers	Roustabouts, oil & gas	Structural metal fabricators & fitters
Electricians	Heating & air conditioning mechanics & installers	Rough carpenters	Engine & other machine assemblers
Pipelayers, plumbers, pipefitters & steamfitters	Forest & conservation workers	Derrick operators, oil & gas	Refrigeration mechanics & installers
Operating engineers & other constr. equip. operators	Electrical motor & power tool repairers	Derrick operators, oil & gas	Auto body & related repairers
Roofers	Painters, construction & maintenance	Roustabouts, oil & gas	Helpers – brick masons, stone masons
Brick masons & block masons	Rough carpenters	Electrical motor & power tool repairers	Pipefitters & steamfitters
Drywall & ceiling tile installers	Rough carpenters	Electrical & electronic repairers	Cooks, short order
Carpet, floor & tile installers & finishers	Cement masons & concrete finishers	Mine cutting & channeling machine operators	Plating & coating machine operators

¹⁰ Table 6.3 is extracted from Appendix Table H.2 in Appendix H.

- Generally similar in 23 of the remaining 24 characteristics, ranging from Spatial Ability to Persistence.

Furthermore, consistent with the observation that the two occupations typically occur in very different physical settings, the only worker characteristic in which the two occupations differ substantially is the value workers place on working conditions, where the distance between the two occupations is .25. That single strongly-differing characteristic is, however, more than offset by the high degree of similarity on the remaining 42 characteristics.

In many cases, a construction industry employer seeking to hire workers for on-site construction jobs might actually hire workers from occupations identified as similar. For instance, Maintenance and General Repair Workers is one of the occupations identified as similar to Dry Wall Installers. Here, persons currently working as Maintenance and General Repair Workers might literally be available for and interested in becoming Dry Wall Installers -- particularly because the average earnings in the latter field is nearly 20% higher than in the former.¹¹

However, availability in that limited, literal sense may be precluded because workers in the similar occupations do not currently possess job skills specific to the construction occupation in question. In addition, some current workers in the non-construction occupations might not be interested in transferring to a construction occupation in mid career because they have acquired skills and seniority in their present occupations. However, such literal availability is not necessary for an occupation to be considered similar in our availability analysis. Instead, the focus is on occupations where the workers have similar abilities and interests to workers in a corresponding construction occupation. Consider, for example, Home Appliance Repairers, which is similar to Electricians. Persons currently employed as Home Appliance Repairers may or may not be currently willing to move to the counterpart construction occupation. They may or may not possess the occupationally-specific skills or licenses to do so. However, the similarity in their abilities and interests to those of Electricians suggests that, earlier in their careers, they might have been available and interested in starting on career paths leading to that construction occupation.

It is in that broader, longer-run sense that similar occupations are reasonable to include in calculating standards of availability for construction occupations. In effect, they examine the question of worker availability from the point of view of: "If this non-construction occupation employs X percentage of women and minorities among its workers, why is that not true of the corresponding construction occupation as well?" They establish a more accurate measure of the discrimination-free expected representation of women and minorities in construction occupations than current employment in those construction occupations alone.

¹¹ US Bureau of Labor Statistics (2007), Table 2.

Estimating Availability

The consequence of including similar occupations when estimating availability becomes evident when demographic information on the workforce is attached to the occupations. As Chapter 4 discussed, the most current nation-wide data describing the demographic composition of the workforce in specific occupations is the U.S. Census Bureau's American Community Survey compiled during 2006-2008 (ACS 2006-2008). Table 6.4 presents the availability computed from ACS of women, African Americans, and Hispanics for the 10 largest construction occupations analyzed in O*NET.¹²

Table 6.4 highlights the difference between availabilities computed using current employment in a construction occupation alone and those computed using current employment in that occupation and the set of similar occupations identified using the procedure described in the first half of this chapter. Consider, for example, Drywall Installers. According to the fifth row of Table 6.4, nation-wide, women are 2.5% of persons currently employed in this occupation, but they are 7.5% of workers in Drywall Installers and 49 other occupations similar to Drywall Installer, an increase of 5.0 percentage points. In parallel, African Americans are 5.6% of persons currently employed in this occupation alone but 9.7% of workers in the broader set that includes Drywall Installers and its similar occupations, an increase of 4.1 percentage points.

Data on Drywall Installers for Hispanics illustrates a different situation. Hispanics constitute 51.2% of persons currently employed as Drywall Installers but 20.2% of workers in all occupations in Drywall Installers plus its similar occupations, a decrease of 31.0%. As Chapter 5 foreshadowed, this pattern of representation in an on-site construction occupation exceeding that in the occupation's broader group of similar occupations is common for Hispanics. As the final row of Table 6.4 reports, it occurs in 63.6% of the on-site construction occupations where a comparison can be made.

However, a finding of over-representation is the exception for the other demographic groups examined in Table 6.4. For women, it occurs in only 4.7% of construction occupation; for African Americans, in 18.6%; and for Asians, in 16.3%. When all 45 construction occupations are combined, the nation-wide results for all demographic groups examined are as follows:¹³

- Women represent 3.0% of all workers in the construction occupations but 8.1% of workers in those occupations' groups of similar occupations. Thus, when availability is computed from the construction occupations' similar occupations rather than construction occupations alone, the standard of availability or expected employment increases by 5.1 percentage points. Stated differently, in

¹² Appendix G provides availability figures for additional demographic groups as well as additional occupations.

¹³ See the next to last row of Table 6.3 and Row (46) in Appendix Tables G.1–G.5.

changing from 3.0% to 8.1%, representation increases to 270% of the former figure.

Table 6.4 ¹⁴
Representation of Women, African Americans, and Hispanics in
Selected On-Site Construction Occupations, Nationwide,
American Community Survey, 2006-2008

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Occupation	Female %			African American %			Hispanic %		
	In this Occupation Alone	In this Occupation's Similar Occupations	Difference	In this Occupation Alone	In this Occupation's Similar Occupations	Difference	In this Occupation Alone	In this Occupation's Similar Occupations	Difference
Construction carpenters	1.8%	7.0%	5.2%	5.0%	9.2%	4.2%	25.5%	18.4%	-7.1%
Construction laborers	3.2%	8.3%	5.1%	8.8%	10.8%	2.0%	37.0%	28.7%	-8.3%
Operating engineers & other constr. equip. ops.	2.3%	9.7%	7.4%	6.2%	11.2%	5.0%	13.2%	18.0%	4.8%
Drywall & ceiling tile installers	2.5%	7.5%	5.0%	5.6%	9.7%	4.1%	51.2%	20.2%	-31.0%
Electricians	2.3%	4.1%	1.9%	7.5%	8.6%	1.1%	14.3%	18.4%	4.1%
Painters, construction & maintenance	7.3%	10.1%	2.8%	7.0%	9.8%	2.8%	37.5%	31.0%	-6.5%
Floor layers	2.4%	12.6%	10.2%	4.9%	10.8%	5.9%	38.6%	28.1%	-10.5%
Plumbers	1.5%	6.0%	4.5%	7.5%	9.2%	1.7%	19.7%	19.0%	-0.7%
Roofers	1.4%	10.3%	9.0%	7.6%	10.3%	2.7%	41.9%	28.0%	-13.9%
Weighted average of 45 occupations	3.0%	8.1%	5.1%	7.3%	9.9%	2.6%	27.0%	22.8%	-4.1%
% of occups. w/ negative difference			4.7%			18.6%			62.8%

¹⁴ Table 6.4 is extracted from Appendix Tables G.1, G.2, and G.5 in Appendix G.

- African Americans represent 7.3% of all workers in the construction occupations but 9.9% of workers in those occupations' groups of similar occupations. Thus, when availability is computed from the construction occupations' similar occupations rather than the construction occupations alone, the standard of availability or expected employment increases by 2.6 percentage points. Stated differently, in changing from 7.3% to 9.9%, expected representation increases to 136% of the former figure.
- Asians represent 1.8% of all workers in the construction occupations but 2.4% of workers in those occupations' groups of similar occupations. Thus, when availability is computed from the construction occupations' similar occupations rather than the construction occupations alone, the standard of availability or expected employment increases by 0.6 percentage points. Stated differently, in changing from 1.8% to 2.4%, expected representation increases to 133% of the former figure.
- American Indians/Alaska Natives and Native Hawaiians/Other Pacific Islanders combined represent 2.1% of all workers in the construction occupations but 1.9% of workers in those occupations' groups of similar occupations. Thus, when availability is computed from the construction occupations' similar occupations rather than the construction occupations alone, the standard of availability or expected employment decreases by 0.2 percentage points. Stated differently, in changing from 2.1% to 1.9%, expected representation decreases to 95% of the former figure.
- Hispanics represent 28.6% of all workers in the construction occupations but 24.1% of workers in those occupations' groups of similar occupations. Thus, when availability is computed from the construction occupations' similar occupations rather than the construction occupations alone, the standard of availability or expected employment decreases by 4.5 percentage points. Stated differently, in changing from 28.6% to 24.1%, expected representation decreases to 84% of the former figure.

Clustering Occupations

As the previous section demonstrates, availability numbers can be computed at the nation-wide level for all 45 construction occupations separately analyzed in O*NET. However, at least three considerations suggest that, for practical purposes, it may be appropriate to combine the resulting estimates into broader occupational groups.

One consideration is whether the number of observations available in ACS data is sufficient to provide reliable, precise estimates. In formal statistical terms, the concern here is that small samples are associated with large "margins of error." This concern becomes particularly acute when availability is computed for smaller occupations (for example, Paving, Surfacing & Tamping Equipment Operators, with 24,000 workers nationwide)

for smaller gender, race, and ethnicity groups (for example, Asians, with an expected representation in construction occupations of 2.8% nation-wide), in smaller local labor markets (for example, the Lewiston, ID-WA Economic Area, which accounts for less than one-tenth of one percent of the nation's economic activity). Although the numbers in Appendices G and H demonstrate that these figures can be calculated, caution is appropriate in relying on many of them.

A second consideration supporting the clustering of construction occupations when computing availability is the similarity of construction occupations discussed throughout this chapter. In terms of workers currently available to perform specialized kinds of construction work, occupations may not be interchangeable in the short run. This is particularly true of skilled construction occupations including those requiring licenses to practice, such as electricians and plumbers. However, for many other construction occupations, workers may move more flexibly across occupational boundaries, reflecting overlaps in job duties and skill requirements. Thus, carpenters may install drywall rather than deferring to a drywall installer and windows rather than deferring to a glazier; plasterers may paint walls as well as plaster them; roofers may double as insulation workers; and laborers may work as trade helpers and vice-versa. Thus, in practice, division of construction work into all 45 separate occupations analyzed in this chapter may be excessive.

A final consideration favoring occupational clustering is minimization of administrative burdens for users of availability figures. If employers are provided availability figures for construction occupations separately, they might have to perform as many as 45 separate availability and utilization analyses. To do so, they would not only have to look up as many as 45 availability figures for each demographic group in each local labor market in which they have employees. They would also have to keep track of employees or employee hours in the same multiple categories. Using standard practices already established for preparing affirmative action plans,¹⁵ employers might themselves simplify their analyses by clustering occupations into broader "job groups," but that clustering itself would require employers to conduct additional analyses.

Together these three considerations suggest that availability figures covering groups of construction workers broader than specific occupations would promote administrative efficiency without unduly compromising, or even enhancing, conceptual correctness and accuracy.

With respect to compliance with federal equal opportunity requirements, one system of occupational grouping is particularly well established. This is the 10-category

¹⁵ US OFCCP (2009B).

system utilized in EEO-1 reports. There, two categories are relevant to on-site construction workers:¹⁶

- Craft Workers (skilled). “[J]obs in this category include higher skilled occupations in construction (building trades craft workers and their formal apprentices). Examples include: boilermakers; brick and stone masons; carpenters; electricians; painters...; glaziers; pipelayers, plumbers, pipefitters, and steamfitters; plasterers; roofers; [and] elevator installers.” Thus, it encompasses all on-site construction occupations analyzed in O*NET other than those discussed in the next bullet.
- Laborers and Helpers (unskilled). “Jobs in this category include workers with more limited skills who require only brief training to perform tasks that require little or no independent judgment. Examples include: ...construction worker helpers;...construction laborers; [and] septic tanks servicers and sewer pipe cleaners.”

Larger construction employers are already familiar with this taxonomy from using it in filing EEO-1 reports. Smaller construction employers would find the taxonomy consistent with distinctions, such as that between skilled workers and unskilled workers, already in common use in their industry. Because of its compatibility with current practices in both the construction industry and EO enforcement activities, a two-category division into “skilled workers” and “unskilled workers” is a logical choice if availabilities are to be computed for categories broader than individual occupations.

Accordingly, when we compute availabilities in Chapter 8 and report them in Appendix H, we provide these figures for these two groups of occupations as well as for the 45 individual occupations themselves.

¹⁶ These descriptions are From US EEOC (2006), Section 5. A third, closely-related category in the EEOC reporting system, which has been used in some analyses in Chapters 4 and 5, is Operatives (Semi-Skilled). However, the EEOC generally applies this grouping to manufacturing occupations and places semi-skilled workers such as operators of construction equipment into the skilled crafts category.

Chapter 7

Local Labor Markets

The demographic profile of American workers varies considerably among locations in the nation. For example, in the 2000 Census:¹

- African Americans were 31.3% of the Civilian Labor Force in Mississippi but 0.2% in Montana;
- Hispanics were 27.5% of the Civilian Labor Force in Texas but 0.6% in Maine;
- Asians were 11.1% of the Civilian Labor Force in California but 0.5% in North Dakota;
- American Indians/Alaska Natives were 7.0% of the Civilian Labor Force in New Mexico but 0.1% in Pennsylvania;² and
- Women were 49.1% of the Civilian Labor Force in Maryland but 44.7% in Utah.

The implication of such variation is that for race and gender employment availabilities accurately to reflect the work force available to construction contractors, it is necessary to calculate them by local labor market rather than nationally. This chapter addresses the question of how those local labor markets can reasonably be defined.

Why a Uniform Definition?

OFCCP requires supply and service contractors developing affirmative action plans to determine for themselves the geographical range of the labor market for which it is appropriate to calculate availability, and to do so separately for individual job groups:³

Contractors must calculate...percentages of women and minorities with requisite skills in the reasonable recruitment area....The “reasonable recruitment area” represents the area from which the contractor usually

¹ US Census Bureau (2010A). Here, race figures are for non-Hispanics identifying with that race group alone.

² Parallel data on the Civilian Labor Force are not available for Hawaii, the location where Native Hawaiians and Pacific Islands are most prevalent. However, according to the 2000 Census, Native Hawaiians/Other Pacific Islanders were 9.1% of residents in that state, compared to, for example, less than 0.1% in Ohio (U.S. Census Bureau, 2010C).

³ US OFCCP (2009B), p. 21.

seeks or reasonably could seek workers for a particular job group. For example, it may coincide with the immediate labor area for unskilled entry-level positions, or it may cover a larger area (state, region, or nation) for managerial or professional positions. Generally speaking, the more complex a job or the higher the position in the organizational structure it occupies, the broader the recruitment area becomes.

To support employers' choices, the Census Bureau's EEO Tabulation from the 2000 Census offers data on the demographic composition of the labor force at five geographical levels:⁴

- Nation-wide
- States
- Metropolitan Areas
- Counties
- Places (e.g., cities)

Paralleling this requirement, OFCCP could require each construction contractor to determine an appropriate reasonable recruitment area for each on-site construction occupation it employs. However, at least three circumstances suggest adopting a different approach.

The first circumstance is that, as Chapter 6 discussed, on-site construction occupations are relatively few in number -- only 45 (5.2%) among the 838 occupations for which O*NET provides data -- and relatively similar to each other in many of the characteristics that O*NET measures. Although it may be appropriate to define different geographical labor markets for, for example, physicists (nation-wide) and janitors (local), different definitions are not equally necessary for, for example, carpenters and plumbers. For on-site construction occupations, hiring is almost universally local.⁵

Second, there is little variation among construction employers in the range of their recruitment. This uniformity is consistent with the industry's tendency to follow standard practices discussed in Chapter 2, and it generally applies to both smaller construction firms and larger ones. This circumstance differentiates the construction industry from a number of other industries. For example, within the accounting services industry, the "Big Four" accounting firms whose practices tend to be national or even global in scope tend to recruit nationally for entry-level accounting professionals, whereas an accounting firm with half a dozen employees serving a local clientele and located in an urban area would typically recruit such employees locally.

⁴ U.S. Census Bureau (2010A) For reasons of confidentiality, this source does not provide data for smaller entities at these levels (e.g. in places with fewer than 50,000 residents).

⁵ Exceptions primarily involve highly specialized skills not available in smaller local labor markets -- for example, Elevator Installers in thinly-populated rural areas, or Structural Iron and Steel Workers to work at "skyscraper" heights.

A third circumstance, also discussed in Chapter 2, is the peripatetic, project-by-project nature of construction work. Employers in many industries typically employ workers for extended periods at offices or plants whose locations are fixed. In contrast, both large and small construction firms typically accept assignments of limited duration in locations that vary from project to project, often hiring different employees locally for each project. Thus, construction firms would have to determine local labor markets repeatedly, for every project, rather than only once.

Together, these circumstances suggest the desirability of a standard definition of the relevant labor market (‘reasonable recruitment area’) for on-site construction workers.

Selecting the Appropriate Definition

If we are to specify such a single standard, what should it be?

As the previous section discussed, hiring for on-site construction occupations is predominantly local. Therefore, large geographical areas -- such as the entire nation, multi-state regions, or whole states -- would generally be inappropriately broad.

A narrower grouping to consider is the U.S. Census Bureau’s Core-Based Statistical Areas (CBSAs). A CBSA is a multi-county area with a relatively high population density at its core -- a central city or cities -- and surrounding counties with substantial worker commuting ties to the core or each other. CBSAs with large cities at their center are called Metropolitan Statistical Areas, while those with smaller urban centers are called Micropolitan Areas.⁶ There are currently 953 CBSAs across the United States.

Because employment commuting patterns are central to the definition of CBSAs, these areas are used as local labor market in many equal employment opportunity enforcement contexts, as well as employment research. However, several considerations suggest they not be used that way for on-site construction workers.

The first consideration is that the CBSAs do not cover the entire nation. Although they encompass about 94% of the U.S. population, they cover only 56% of its 3,140 counties.⁷ A second definition of local labor markets would have to be established for the uncovered locations and their workers. Since no standard definition exists comparable to the CBSAs for urban areas, considerable analytical effort might be required to do so in a defensible manner.

⁶ The current standards for defining CBSAs are in US Office of Management and Budget (2000). In 2013, these standards will be superseded by those in US Office of Management and Budget (2010).

⁷ US Office of Management and Budget (2010).

A second consideration is that dividing the nation into a large number of local labor markets -- 953 CBSAs plus dozens or perhaps hundreds of additional rural areas -- would result in many local labor markets with relatively small populations. When data from the American Community Survey (ACS) is then used to calculate availability in these locations of small demographic groups in small occupations, the number of observations in the ACS would prove too limited for stable, accurate estimates. For example, in Alaska over the period 2006 through 2008, the American Community Survey actually sampled only eight carpenters of all demographic backgrounds.

A third consideration is differences in commuting patterns between on-site construction workers and the remainder of the work force. As Chapter 2 discussed, the project-by-project nature of typical construction work means that construction workers must often be unusually mobile. They may accept jobs at a substantial distance from their homes and move temporarily to the work sites, living in campers or rented accommodations only as long as the job lasts.⁸ In that circumstance, although they are part of a local labor force for one project, they are in a different local area for their next project and are not appropriately counted in their former locality on an ongoing basis.

Alternatively, construction workers often commute daily over unusually long distances to job sites.⁹ Table 7.1 compares the commuting patterns of on-site construction workers in the construction industry to those of all other workers in all other industries. It shows that the average minutes of a one-way commute are 34% longer for the construction workers. It also reports the proportion of workers experiencing “extreme commutes,” defined here as lasting an hour or more one way. The proportion of on-site construction workers in the construction industry with those commutes is 221% -- more than double -- that of other workers.

⁸ In one illustration of this pattern, after failing to find work for six months near his home on the Big Island of Hawaii, one carpenter accepted work on the island of Oahu, living there during the work week and commuting home every weekend (Allgire, 2010). For more systematic data on this pattern, see “Hazardous Materials Workers” in U.S. Bureau of Labor Statistics (2010C); “Operating Engineers” in Building Contractors Association of New Jersey (2010); and Tuchsén, Hannerz & Sopangenberg (2005); and Fahys-Smith (1983).

As part of this practice, construction unions often make provisions for “booming out” -- that is, allowing members of one union local to work in the jurisdiction of a different local while benefits such as pension contributions continue to be administered in their “home” location.

⁹ In one illustration of this pattern, a worker residing in Stroudsburg, PA was reported to take a bus at 4:30 AM daily to get to his unionized construction job in Manhattan, returning on that bus in the evening (Bloomsberg Business Week, 2005). For more systematic data on extreme commuting, see Pisarski (2006).

Table 7.1 ¹⁰
Commutes to Work for On-Site Construction
Workers in the Construction Industry
and Others, Nation-wide, American
Community Survey 2006-2008

(a)	(b)	(c)	(d)
Measure	On-Site Construction Workers in the Construction Industry	All Workers in All Other Industries	Column (c) / Column (b)
Average commute time (minutes one way)	33.2	24.7	1.34
% of one-way commutes lasting \geq one hour	16.6%	7.5%	2.21

Together, these three circumstances suggest that an appropriate definition of the local labor market for on-site construction occupations would be

- similar to CBSAs in representing integrated local markets; but
- larger than CBSAs; and
- cover the entire nation.

A well-established system of geographical entities meeting all those requirements is the Economic Areas (EAs) defined by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce. EAs are defined as regional markets for labor, products, and information that consist of one or more metropolitan or micropolitan statistical areas and the surrounding counties that are economically related to those areas.¹¹ The nation is currently divided into 179 EAs. The largest -- such as the New York-Newark-Bridgeport NY-NJ-CT area -- cover parts of multiple states. Among smaller EAs, the entire state is a single EA in Alaska (the Anchorage MSA) and Hawaii (the Honolulu EA).

¹⁰ Table 7.1 is tabulated by the authors from the American Community Survey 2006-2008, nationwide.

¹¹ Johnson & Kort (2004), p. 68.

An advantage of EAs is that each is defined in terms of counties. That means that a construction contractor can readily find the EA relevant to any of its work sites via a simple table using only the state and county where it is located. Appendix Table F.1 in Appendix F provides a table relating each of the nation's 3,140 counties or county-equivalents to its Economic Area.

Consistent with the approach discussed here, Chapter 8 and Appendix H present availability figures for each of the 179 EAs.

Representing Economic Areas in the ACS

For use outside the Census Bureau, such as to develop this report, the Census Bureau releases American Community Survey (ACS) data in geographical units called Public Use Microdata Areas (PUMAs). Thus, to compute local availabilities as we do in Chapter 8 and Appendix H, it is necessary to match ACS PUMAs to Economic Areas.

For 77% of PUMAs nationwide, this is a simple process, since each PUMA is contained entirely within one EA. Because each PUMA encompasses about 100,000 persons, that situation prevails in the center of large urban areas, where individual PUMAs are smaller than most of the counties that are the building blocks of EAs.

However, the remaining 23% of PUMAs join together multiple rural counties with small populations, and their constituent counties may be part of different Economic Areas. The most extreme example involves PUMA 03100, which covers six rural counties in Central Texas, each of which is associated with a different Economic Area (Austin, Dallas, Midland, San Antonio, San Angelo, and Lubbock, respectively). In our computations of availabilities for EAs, data from such PUMAs are included in all Economic Areas of which the PUMA is any part. Thus, data from some PUMAs are included in the computation of availabilities in more than one EA. This "inclusive" approach seems appropriate in light of the discussion, earlier in this chapter, of the broad area within which on-site construction workers often commute and construction firms often operate.

This procedure is reasonable for preparing the availability figures from the American Community Survey 2006-2008 that appear in Appendix H. According to current plans, the U.S. Census Bureau will release an updated EEO Special Tabulation based on the ACS 2006-2010 sometime in 2012, and that tabulation will report workforce data by Economic Areas. When that release occurs, our procedure for matching ACS PUMAs data to EAs will no longer be necessary.

Chapter 8

New Availability Figures

The “bottom line” of Chapters 6 and 7 is a new set of procedures for computing availability. The principal features of this procedure are:

1. Availabilities are based on persons in occupations similar to construction occupations, not construction occupations alone.
2. Availabilities are based on data from the most recent American Community Survey, ACS 2006-2008.
3. Availabilities are reported for five demographic groups:
 - Women
 - Hispanics
 - African Americans
 - Asians
 - American Indians/Alaska Natives and Native Hawaiians/
Other Pacific Islander (abbreviated “AINH”).
4. Availabilities are reported for 179 Economic Areas.
5. Availabilities are reported for both 45 individual construction occupations and for two broad groups of occupations: “Skilled” and “Unskilled.”

Appendix Table H.1 in Appendix H provides availability figures computed under this procedure for the “Skilled Craft Workers” and “Unskilled Laborers & Helpers” categories. It also reports figures for “All On-Site Construction Occupations,” which is those two groups combined.¹

Table 8.1. reports the nation-wide averages for these figures, reported in the first row of Appendix Table H.1. The remaining rows of Table H.1 provide parallel figures for the 179 Economic Areas.

¹ As Footnote 1 in Chapter 5 discussed, the sum of the figures in each row adds to more than 100% because of overlaps among the demographic groups reported.

Table 8.1 ²
Availabilities in Skilled and Unskilled Occupations Nationwide
Calculated using the Methodology in Chapter 6

(a) Group	(b) Women	(c) Hispanics	(d) Af. Ams.	(e) Asians	(f) AINH
Craft workers (skilled)	7.9%	21.6%	9.3%	2.2%	1.4%
Laborers & helpers (unskilled)	9.8%	27.1%	11.2%	1.9%	1.5%
All on-site construction occupations	8.3%	23.0%	9.8%	2.1%	1.4%

Appendix Table H.2 repeats these availability figures for skilled, unskilled, and all workers and then adds counterpart figures for 45 construction occupations. Table 8.2 provides a sample page from this table, for the first Economic Area in alphabetical order, Aberdeen SD.

Table 8.2 ³
Availabilities in On-Site Construction Occupations in
the Aberdeen, South Dakota Economic Area
Calculated using the Methodology in Chapter 6

(a) Occupation	(b) Women	(c) Hispanics	(d) Af. Ams.	(e) Asians	(f) AINH
Craft workers (skilled)	8.7%	0.9%	0.1%	0.1%	9.4%
Laborers & helpers (unskilled)	13.4%	2.6%	0.5%	0.2%	15.6%
All on-site construction occupations	9.8%	1.3%	0.2%	0.1%	10.8%
Boilermakers	4.9%	0.3%	0.2%	0.0%	17.2%
Brickmasons and blockmasons	6.5%	1.0%	0.0%	0.0%	8.1%
Stonemasons	8.6%	0.8%	0.1%	0.0%	5.6%
Construction carpenters	6.7%	0.7%	0.0%	0.0%	8.1%
Rough carpenters	7.2%	0.7%	0.0%	0.0%	7.8%
Carpet installers	13.5%	2.1%	0.6%	0.2%	18.1%
Floor layers, ex. carpet, wood & hard tiles	11.2%	1.8%	0.1%	0.0%	9.1%
Floor sanders and finishers	22.0%	2.3%	0.2%	1.3%	7.2%
Tile and marble setters	6.7%	2.0%	0.1%	0.0%	11.8%
Cement masons & concrete finishers	6.9%	1.3%	0.3%	0.0%	18.5%
Terrazzo workers & finishers	7.6%	0.3%	0.2%	0.0%	18.3%
Construction laborers	13.3%	2.6%	0.5%	0.2%	15.7%
Paving, surfacing & Tamping equip. ops.	13.6%	2.2%	0.5%	0.2%	17.7%

² Table 8.1 is excerpted from Appendix Table H.1 in Appendix H.

³ Table 8.2 is excerpted from Appendix Table H.2 in Appendix H.

Pile-driver operators	6.0%	0.4%	0.1%	0.0%	7.5%
Operating engineers & other equip. ops.	6.9%	0.8%	0.0%	0.0%	7.5%
Drywall and ceiling tile installers	7.6%	0.7%	0.0%	0.0%	8.4%
Tapers	29.0%	0.8%	0.2%	1.3%	17.4%
Electricians	5.9%	0.6%	0.0%	0.0%	8.6%
Glaziers	15.4%	2.4%	0.4%	1.5%	14.9%
Insulation workers, floor, ceiling & wall	14.3%	2.5%	0.2%	0.2%	6.8%
Insulation workers, mechanical	10.9%	0.6%	0.0%	0.0%	8.7%
Painters, construction & maintenance	15.9%	1.9%	0.3%	1.2%	12.5%
Paperhangers	17.0%	1.2%	0.1%	0.0%	17.1%
Pipelayers	17.1%	2.7%	0.3%	0.2%	7.0%
Pipe fitters and steamfitters	4.0%	0.3%	0.0%	0.0%	7.5%
Plumbers	5.7%	0.5%	0.0%	0.0%	7.8%
Plasterers & stucco masons	11.6%	1.8%	0.1%	0.1%	6.7%
Reinforcing iron & rebar workers	5.0%	1.5%	0.1%	0.0%	8.7%
Roofers	14.1%	2.1%	0.3%	0.1%	7.4%
Sheet metal workers	6.2%	0.3%	0.2%	0.0%	20.7%
Structural iron & steel workers	5.6%	0.2%	0.2%	0.0%	7.2%
Helpers--brickmasons, blockmasons, stonemasons & tile and marble setters	12.4%	2.1%	0.5%	0.2%	17.9%
Helpers—carpenters	19.7%	2.9%	0.4%	0.2%	8.1%
Helpers—electricians	13.0%	1.8%	0.5%	0.2%	15.7%
Helpers -- painters, paperhangers, plasterers, and stucco masons	23.1%	1.7%	0.2%	0.9%	13.8%
Helpers--pipelayers, plumbers, pipefitters & steamfitters	24.9%	1.9%	0.4%	0.1%	16.2%
Helpers—roofers	14.1%	2.7%	0.5%	0.2%	16.1%
Construction and building inspectors	10.5%	0.0%	0.0%	0.0%	12.7%
Elevator installers and repairers	10.2%	0.6%	0.0%	0.0%	10.0%
Fence erectors	13.3%	2.7%	0.3%	0.2%	8.1%
Hazardous materials removal workers	6.2%	0.2%	0.0%	0.0%	8.9%
Highway maintenance workers	7.3%	1.1%	0.2%	0.0%	15.5%
Rail-track laying & maint. Equip. ops.	13.5%	1.9%	0.3%	0.2%	14.4%
Septic tank servicers & sewer pipe cleaners	5.3%	0.2%	0.2%	0.0%	14.4%
Segmental pavers	18.6%	2.2%	0.4%	0.2%	18.8%

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APPENDIX A

Appendix Table A.1
Women in On-Site Construction Occupations in the Construction Industry and Other Industries, 2000 Census EEO Special Tabulation

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	Occupation	Total Employment in the Construction Industry			Utilization of Women									Under-Utilization of Women		
					All Industries			Construction Industry			Industries Other than Construction			Female % in Construction Ind. - Female % in Other Industries	Shortfall of Women in Construction Industry	
		Total Workers	% of Total Workers	Cumulative %	Total Workers	Female Workers	Female %	Total Workers	Female Workers	Female %	Total Workers	Female Workers	Female %			
(1)	676	Carpenters	1,147,954	23.4%	23.4%	1,304,505	23,500	1.8%	1,147,954	17,589	1.5%	156,551	5,911	3.8%	-2.2%	-25,755
(2)	677	Construction laborers	1,005,274	20.5%	43.9%	1,067,920	35,032	3.3%	1,005,274	32,064	3.2%	62,646	2,968	4.7%	-1.5%	-15,563
(3)	635	Electricians	442,645	9.0%	52.9%	681,315	16,707	2.5%	442,645	8,735	2.0%	238,670	7,972	3.3%	-1.4%	-6,050
(4)	642	Painters, construction & maintenance	430,559	8.8%	61.6%	495,320	35,552	7.2%	430,559	29,239	6.8%	64,761	6,313	9.7%	-3.0%	-12,733
(5)	643	Pipelayers, plumbers, pipefitters, & steamfitters	383,299	7.8%	69.5%	509,440	8,440	1.7%	383,299	5,559	1.5%	126,141	2,881	2.3%	-0.8%	-3,195
(6)	632	Misc. construction equipment operators	249,414	5.1%	74.5%	311,760	5,987	1.9%	249,414	4,624	1.9%	62,346	1,363	2.2%	-0.3%	-829
(7)	633	Roofers	184,264	3.8%	78.3%	189,525	2,967	1.6%	184,264	2,779	1.5%	5,261	188	3.6%	-2.1%	-3,806
(8)	634	Brickmasons, blockmasons, & stonemasons	178,214	3.6%	81.9%	187,880	2,067	1.1%	178,214	1,699	1.0%	9,666	368	3.8%	-2.9%	-5,086
(9)	635	Drywall installers, ceiling tile installers, & tapers	166,299	3.4%	85.3%	170,665	4,407	2.6%	166,299	4,125	2.5%	4,366	282	6.5%	-4.0%	-6,616
(10)	636	Carpet, floor, and tile installers & finishers	162,085	3.3%	88.6%	209,900	5,105	2.4%	162,085	3,625	2.2%	47,815	1,480	3.1%	-0.9%	-1,392
(11)	637	Sheet metal workers	80,730	1.6%	90.3%	150,150	6,059	4.0%	80,730	1,230	1.5%	69,420	4,829	7.0%	-5.4%	-4,386
(12)	638	Cement masons, concrete finishers, & terrazo workers	75,804	1.5%	91.8%	79,850	951	1.2%	75,804	849	1.1%	4,046	102	2.5%	-1.4%	-1,062
(13)	673	Highway Maintenance Workers	75,700	1.5%	93.3%	84,649	3,286	3.9%	75,700	2,865	3.8%	8,949	421	4.7%	-0.9%	-696

(14)	660	Helpers, construction trades	56,310	1.1%	94.5%	64,620	3,086	4.8%	56,310	2,175	3.9%	8,310	911	11.0%	-7.1%	-3,998
(15)	661	Structural iron and steel workers	56,183	1.1%	95.6%	74,290	1,735	2.3%	56,183	1,103	2.0%	18,107	632	3.5%	-1.5%	-858
(16)	646	Plasterers & stucco masons	38,408	0.8%	96.4%	39,180	522	1.3%	38,408	444	1.2%	772	78	10.1%	-8.9%	-3,437
(17)	640	Insulation workers	33,540	0.7%	97.1%	37,705	1,454	3.9%	33,540	995	3.0%	4,165	459	11.0%	-8.1%	-2,701
(18)	666	Construction & building inspectors	25,050	0.5%	97.6%	75,465	7,166	9.5%	25,050	1,860	7.4%	50,415	5,306	10.5%	-3.1%	-776
(19)	670	Elevator Installers & repairers	22,528	0.5%	98.1%	25,790	313	1.2%	22,528	258	1.1%	3,262	55	1.7%	-0.5%	-122
(20)	671	Fence erectors	21,724	0.4%	98.5%	26,515	897	3.4%	21,724	544	2.5%	4,791	353	7.4%	-4.9%	-1,057
(21)	676	Misc. construction & related workers	18,814	0.4%	98.9%	29,850	1,054	3.5%	18,814	489	2.6%	11,036	565	5.1%	-2.5%	-474
(22)	677	Glaziers	17,163	0.3%	99.2%	42,564	1,899	4.5%	17,163	388	2.3%	25,401	1,511	5.9%	-3.7%	-633
(23)	678	Paperhangers	14,611	0.3%	99.5%	16,500	4,813	29.2%	14,611	4,452	30.5%	1,889	361	19.1%	11.4%	1,660
(24)	630	Paving, surfacing, & tamping equipment operators	12,874	0.3%	99.8%	13,505	498	3.7%	12,874	440	3.4%	631	58	9.2%	-5.8%	-743
(25)	621	Boilermakers	5,774	0.1%	99.9%	18,385	515	2.8%	5,774	89	1.5%	12,611	426	3.4%	-1.8%	-106
(26)	672	Hazardous materials removal workers	2,804	0.1%	100.0%	19,110	1,704	8.9%	2,804	122	4.4%	16,306	1,582	9.7%	-5.4%	-150
(27)	675	Septic tank servicers & sewer pipe cleaners	1,244	0.0%	100.0%	7,620	231	3.0%	1,244	10	0.8%	6,376	221	3.5%	-2.7%	-33
(28)	TOTAL		4,909,268	100.0%	100.0%	5,933,978	175,947	3.0%	4,909,268	128,351	2.6%	1,024,710	47,596	4.6%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]								2.6%			4.7%			-2.0%	-100,597

Occupations w/Shortfall:	26
Occupations with Shortfall / 27 Occupations:	96.3%

Appendix Table A.2
African Americans in On-Site Construction Occupations in the Construction
Industry and Other Industries, 2000 Census EEO Special Tabulation

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	Occupation	Employment in the Construction Industry			All Industries			Construction Industry			Industries Other than Construction			% Af. Am. in Construction Industry - % Af. Am. in Other Industries	Shortfall in Af. Am. Workers in Construction Industry Compared to their Representation in Other Industries
		Total Workers	% of Total Workers	Cumulative %	Total Workers	Af. Am. Workers	Af. Am. %	Total Workers	Af. Am. Workers	Af. Am. %	Total Workers	Af. Am. Workers	Af. Am. %		
(1)	676 Carpenters	1,147,954	23.4%	23.4%	1,304,505	57,161	4.4%	1,147,954	46,320	4.0%	156,551	10,841	6.9%	-2.9%	-33,175
(2)	677 Construction laborers	1,005,274	20.5%	43.9%	1,067,920	94,457	8.8%	1,005,274	85,619	8.5%	62,646	8,838	14.1%	-5.6%	-56,203
(3)	635 Electricians	442,645	9.0%	52.9%	681,315	40,048	5.9%	442,645	23,795	5.4%	238,670	16,253	6.8%	-1.4%	-6,348
(4)	642 Painters, construction & maintenance	430,559	8.8%	61.6%	495,320	33,583	6.8%	430,559	25,434	5.9%	64,761	8,149	12.6%	-6.7%	-28,744
(5)	643 Pipelayers, plumbers, pipefitters, & steamfitters	383,299	7.8%	69.5%	509,440	33,289	6.5%	383,299	21,349	5.6%	126,141	11,940	9.5%	-3.9%	-14,933
(6)	632 Misc. construction equipment operators	249,414	5.1%	74.5%	311,760	19,219	6.2%	249,414	14,445	5.8%	62,346	4,774	7.7%	-1.9%	-4,653
(7)	633 Roofers	184,264	3.8%	78.3%	189,525	13,020	6.9%	184,264	12,255	6.7%	5,261	765	14.5%	-7.9%	-14,539
(8)	634 Brickmasons, blockmasons, & stonemasons	178,214	3.6%	81.9%	187,880	21,767	11.6%	178,214	20,435	11.5%	9,666	1,332	13.8%	-2.3%	-4,123
(9)	635 Drywall installers, ceiling tile installers, & tapers	166,299	3.4%	85.3%	170,665	7,760	4.5%	166,299	7,230	4.3%	4,366	530	12.1%	-7.8%	-12,957
(10)	636 Carpet, floor, and tile installers & finishers	162,085	3.3%	88.6%	209,900	10,070	4.8%	162,085	6,985	4.3%	47,815	3,085	6.5%	-2.1%	-3,473
(11)	637 Sheet metal workers	80,730	1.6%	90.3%	150,150	7,990	5.3%	80,730	3,410	4.2%	69,420	4,580	6.6%	-2.4%	-1,916
(12)	638 Cement masons, concrete finishers, & terrazo workers	75,804	1.5%	91.8%	79,850	11,658	14.6%	75,804	10,900	14.4%	4,046	758	18.7%	-4.4%	-3,302
(13)	673 Highway Maintenance Workers	75,700	1.5%	93.3%	84,649	8,990	10.6%	75,700	7,745	10.2%	8,949	1,245	13.9%	-3.7%	-2,787
(14)	660 Helpers, construction trades	56,310	1.1%	94.5%	64,620	6,089	9.4%	56,310	5,180	9.2%	8,310	909	10.9%	-1.7%	-980

(15)	661	Structural iron and steel workers	56,183	1.1%	95.6%	74,290	4,172	5.6%	56,183	3,094	5.5%	18,107	1,078	6.0%	-0.4%	-251
(16)	646	Plasterers & stucco masons	38,408	0.8%	96.4%	39,180	3,966	10.1%	38,408	3,584	9.3%	772	382	49.5%	-40.2%	-15,421
(17)	640	Insulation workers	33,540	0.7%	97.1%	37,705	3,100	8.2%	33,540	2,495	7.4%	4,165	605	14.5%	-7.1%	-2,377
(18)	666	Construction & building inspectors	25,050	0.5%	97.6%	75,465	5,774	7.7%	25,050	1,685	6.7%	50,415	4,089	8.1%	-1.4%	-347
(19)	670	Elevator Installers & repairers	22,528	0.5%	98.1%	25,790	1,102	4.3%	22,528	730	3.2%	3,262	372	11.4%	-8.2%	-1,839
(20)	671	Fence erectors	21,724	0.4%	98.5%	26,515	1,742	6.6%	21,724	1,300	6.0%	4,791	442	9.2%	-3.2%	-704
(21)	676	Misc. construction & related workers	18,814	0.4%	98.9%	29,850	2,451	8.2%	18,814	1,550	8.2%	11,036	901	8.2%	0.1%	14
(22)	677	Glaziers	17,163	0.3%	99.2%	42,564	2,098	4.9%	17,163	660	3.8%	25,401	1,438	5.7%	-1.8%	-312
(23)	678	Paperhangers	14,611	0.3%	99.5%	16,500	302	1.8%	14,611	144	1.0%	1,889	158	8.4%	-7.4%	-1,078
(24)	630	Paving, surfacing, & tamping equipment operators	12,874	0.3%	99.8%	13,505	1,831	13.6%	12,874	1,745	13.6%	631	86	13.6%	-0.1%	-10
(25)	621	Boilermakers	5,774	0.1%	99.9%	18,385	1,598	8.7%	5,774	315	5.5%	12,611	1,283	10.2%	-4.7%	-272
(26)	672	Hazardous materials removal workers	2,804	0.1%	100.0%	19,110	2,023	10.6%	2,804	383	13.7%	16,306	1,640	10.1%	3.6%	101
(27)	675	Septic tank servicers & sewer pipe cleaners	1,244	0.0%	100.0%	7,620	734	9.6%	1,244	160	12.9%	6,376	574	9.0%	3.9%	48
(28)	TOTAL		4,909,268	100.0%	100.0%	5,933,978	395,994	6.7%	4,909,268	308,947	6.3%	1,024,710	87,047	8.5%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]								6.3%			10.6%			-4.3%	-210,580

Note: African Americans = African Americans Alone + African Americans/Whites + African Americans/American Indians.

Occupations w/Shortfall:	25
Occupations with Shortfall / 27 Occupations:	92.6%

Appendix Table A.3
Asians in On-Site Construction Occupations in the Construction
Industry and Other Industries, 2000 Census EEO Special Tabulation

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
Occupation		Employment in the Construction Industry			All Industries			Construction Industry			Industries Other than Construction			% Asian in Construction Industry - % Asian in Other Industries	Shortfall in Asian Workers in Construction Industry Compared to their Representation in Other Industries
		Total Workers	% of Total Workers	Cumulative %	Total Workers	Asian Workers	Asian %	Total Workers	Asian Workers	Asian %	Total Workers	Asian Workers	Asian %		
(1)	676 Carpenters	1,147,954	23.4%	23.4%	1,304,505	13,709	1.1%	1,147,954	11,580	1.0%	156,551	2,129	1.4%	-0.4%	-4,031
(2)	677 Construction laborers	1,005,274	20.5%	43.9%	1,067,920	11,277	1.1%	1,005,274	10,700	1.1%	62,646	577	0.9%	0.1%	1,441
(3)	635 Electricians	442,645	9.0%	52.9%	681,315	10,074	1.5%	442,645	5,070	1.1%	238,670	5,004	2.1%	-1.0%	-4,211
(4)	642 Painters, construction & maintenance	430,559	8.8%	61.6%	495,320	8,002	1.6%	430,559	6,910	1.6%	64,761	1,092	1.7%	-0.1%	-350
(5)	643 Pipelayers, plumbers, pipefitters, & steamfitters	383,299	7.8%	69.5%	509,440	4,589	0.9%	383,299	3,460	0.9%	126,141	1,129	0.9%	0.0%	29
(6)	632 Misc. construction equipment operators	249,414	5.1%	74.5%	311,760	1,240	0.4%	249,414	894	0.4%	62,346	346	0.6%	-0.2%	-490
(7)	633 Roofers	184,264	3.8%	78.3%	189,525	1,188	0.6%	184,264	1,134	0.6%	5,261	54	1.0%	-0.4%	-757
(8)	634 Brickmasons, blockmasons, & stonemasons	178,214	3.6%	81.9%	187,880	1,078	0.6%	178,214	1,040	0.6%	9,666	38	0.4%	0.2%	339
(9)	635 Drywall installers, ceiling tile installers, & tapers	166,299	3.4%	85.3%	170,665	594	0.3%	166,299	584	0.4%	4,366	10	0.2%	0.1%	203
(10)	636 Carpet, floor, and tile installers & finishers	162,085	3.3%	88.6%	209,900	2,087	1.0%	162,085	1,650	1.0%	47,815	437	0.9%	0.1%	169
(11)	637 Sheet metal workers	80,730	1.6%	90.3%	150,150	2,267	1.5%	80,730	880	1.1%	69,420	1,387	2.0%	-0.9%	-733
(12)	638 Cement masons, concrete finishers, & terrazo workers	75,804	1.5%	91.8%	79,850	225	0.3%	75,804	225	0.3%	4,046	0	0.0%	0.3%	225
(13)	673 Highway Maintenance Workers	75,700	1.5%	93.3%	84,649	340	0.4%	75,700	310	0.4%	8,949	30	0.3%	0.1%	56
(14)	660 Helpers, construction trades	56,310	1.1%	94.5%	64,620	590	0.9%	56,310	445	0.8%	8,310	145	1.7%	-1.0%	-538

(15)	661	Structural iron and steel workers	56,183	1.1%	95.6%	74,290	616	0.8%	56,183	440	0.8%	18,107	176	1.0%	-0.2%	-106
(16)	646	Plasterers & stucco masons	38,408	0.8%	96.4%	39,180	218	0.6%	38,408	210	0.5%	772	8	1.0%	-0.5%	-188
(17)	640	Insulation workers	33,540	0.7%	97.1%	37,705	220	0.6%	33,540	195	0.6%	4,165	25	0.6%	0.0%	-6
(18)	666	Construction & building inspectors	25,050	0.5%	97.6%	75,465	1,469	1.9%	25,050	490	2.0%	50,415	979	1.9%	0.0%	4
(19)	670	Elevator Installers & repairers	22,528	0.5%	98.1%	25,790	403	1.6%	22,528	324	1.4%	3,262	79	2.4%	-1.0%	-222
(20)	671	Fence erectors	21,724	0.4%	98.5%	26,515	133	0.5%	21,724	95	0.4%	4,791	38	0.8%	-0.4%	-77
(21)	676	Misc. construction & related workers	18,814	0.4%	98.9%	29,850	314	1.1%	18,814	109	0.6%	11,036	205	1.9%	-1.3%	-240
(22)	677	Glaziers	17,163	0.3%	99.2%	42,564	575	1.4%	17,163	255	1.5%	25,401	320	1.3%	0.2%	39
(23)	678	Paperhangers	14,611	0.3%	99.5%	16,500	216	1.3%	14,611	158	1.1%	1,889	58	3.1%	-2.0%	-291
(24)	630	Paving, surfacing, & tamping equipment operators	12,874	0.3%	99.8%	13,505	45	0.3%	12,874	35	0.3%	631	10	1.6%	-1.3%	-169
(25)	621	Boilermakers	5,774	0.1%	99.9%	18,385	188	1.0%	5,774	25	0.4%	12,611	163	1.3%	-0.9%	-50
(26)	672	Hazardous materials removal workers	2,804	0.1%	100.0%	19,110	319	1.7%	2,804	4	0.1%	16,306	315	1.9%	-1.8%	-50
(27)	675	Septic tank servicers & sewer pipe cleaners	1,244	0.0%	100.0%	7,620	39	0.5%	1,244	15	1.2%	6,376	24	0.4%	0.8%	10
(28)	TOTAL		4,909,268	100.0%	100.0%	5,933,978	62,015	1.0%	4,909,268	47,237	1.0%	1,024,710	14,778	1.4%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]								1.0%			1.2%			-0.2%	-9,994

Note: Asians = Asians Alone + Asians/Whites

Occupations w/Shortfall:	18
Occupations with Shortfall / 27 Occupations:	66.7%

Appendix Table A.4
American Indian/Alaska Native and Native Hawaiian/Other Pacific Islander Construction Trade Workers
in the Construction Industry and Other Industries, 2000 Census EEO Special Tabulation

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	Occupation	Employment in the Construction Industry			All Industries			Construction Industry			Industries Other than Construction			% Minority in Construction Industry - % Minority in Other Industries	Shortfall in Minority Workers in Construction Industry Compared to their Representation in Other Industries
		Total Workers	% of Total Workers	Cumulative %	Total Workers	Minority Workers	Minority %	Total Workers	Minority Workers	Minority %	Total Workers	Minority Workers	Minority %		
(1)	676 Carpenters	1,147,954	23.4%	23.4%	1,304,505	22,621	1.7%	1,147,954	19,124	1.7%	156,551	3,497	2.2%	-0.6%	-6,519
(2)	677 Construction laborers	1,005,274	20.5%	43.9%	1,067,920	16,949	1.6%	1,005,274	15,489	1.5%	62,646	1,460	2.3%	-0.8%	-7,939
(3)	635 Electricians	442,645	9.0%	52.9%	681,315	9,453	1.4%	442,645	6,135	1.4%	238,670	3,318	1.4%	0.0%	-19
(4)	642 Painters, construction & maintenance	430,559	8.8%	61.6%	495,320	6,721	1.4%	430,559	5,590	1.3%	64,761	1,131	1.7%	-0.4%	-1,929
(5)	643 Pipelayers, plumbers, pipefitters, & steamfitters	383,299	7.8%	69.5%	509,440	7,434	1.5%	383,299	5,424	1.4%	126,141	2,010	1.6%	-0.2%	-684
(6)	632 Misc. construction equipment operators	249,414	5.1%	74.5%	311,760	7,125	2.3%	249,414	5,525	2.2%	62,346	1,600	2.6%	-0.4%	-876
(7)	633 Roofers	184,264	3.8%	78.3%	189,525	4,172	2.2%	184,264	4,060	2.2%	5,261	112	2.1%	0.1%	137
(8)	634 Brickmasons, blockmasons, & stonemasons	178,214	3.6%	81.9%	187,880	2,906	1.5%	178,214	2,779	1.6%	9,666	127	1.3%	0.2%	437
(9)	635 Drywall installers, ceiling tile installers, & tapers	166,299	3.4%	85.3%	170,665	4,155	2.4%	166,299	4,040	2.4%	4,366	115	2.6%	-0.2%	-340
(10)	636 Carpet, floor, and tile installers & finishers	162,085	3.3%	88.6%	209,900	2,843	1.4%	162,085	2,000	1.2%	47,815	843	1.8%	-0.5%	-858
(11)	637 Sheet metal workers	80,730	1.6%	90.3%	150,150	2,118	1.4%	80,730	1,185	1.5%	69,420	933	1.3%	0.1%	100
(12)	638 Cement masons, concrete finishers, & terrazo workers	75,804	1.5%	91.8%	79,850	1,696	2.1%	75,804	1,594	2.1%	4,046	102	2.5%	-0.4%	-317
(13)	673 Highway Maintenance Workers	75,700	1.5%	93.3%	84,649	1,732	2.0%	75,700	1,450	1.9%	8,949	282	3.2%	-1.2%	-935
(14)	660 Helpers, construction trades	56,310	1.1%	94.5%	64,620	953	1.5%	56,310	800	1.4%	8,310	153	1.8%	-0.4%	-237

(15)	661	Structural iron and steel workers	56,183	1.1%	95.6%	74,290	1,960	2.6%	56,183	1,629	2.9%	18,107	331	1.8%	1.1%	602
(16)	646	Plasterers & stucco masons	38,408	0.8%	96.4%	39,180	516	1.3%	38,408	494	1.3%	772	22	2.8%	-1.6%	-601
(17)	640	Insulation workers	33,540	0.7%	97.1%	37,705	558	1.5%	33,540	480	1.4%	4,165	78	1.9%	-0.4%	-148
(18)	666	Construction & building inspectors	25,050	0.5%	97.6%	75,465	1,055	1.4%	25,050	460	1.8%	50,415	595	1.2%	0.7%	164
(19)	670	Elevator Installers & repairers	22,528	0.5%	98.1%	25,790	264	1.0%	22,528	254	1.1%	3,262	10	0.3%	0.8%	185
(20)	671	Fence erectors	21,724	0.4%	98.5%	26,515	534	2.0%	21,724	414	1.9%	4,791	120	2.5%	-0.6%	-130
(21)	676	Misc. construction & related workers	18,814	0.4%	98.9%	29,850	478	1.6%	18,814	335	1.8%	11,036	143	1.3%	0.5%	91
(22)	677	Glaziers	17,163	0.3%	99.2%	42,564	749	1.8%	17,163	304	1.8%	25,401	445	1.8%	0.0%	3
(23)	678	Paperhangers	14,611	0.3%	99.5%	16,500	190	1.2%	14,611	164	1.1%	1,889	26	1.4%	-0.3%	-37
(24)	630	Paving, surfacing, & tamping equipment operators	12,874	0.3%	99.8%	13,505	182	1.3%	12,874	164	1.3%	631	18	2.9%	-1.6%	-203
(25)	621	Boilermakers	5,774	0.1%	99.9%	18,385	407	2.2%	5,774	115	2.0%	12,611	292	2.3%	-0.3%	-19
(26)	672	Hazardous materials removal workers	2,804	0.1%	100.0%	19,110	409	2.1%	2,804	43	1.5%	16,306	366	2.2%	-0.7%	-20
(27)	675	Septic tank servicers & sewer pipe cleaners	1,244	0.0%	100.0%	19,110	100	0.5%	1,244	14	1.1%	17,866	86	0.5%	0.6%	8
(28)	TOTAL		4,909,268	100.0%	100.0%	5,945,468	98,280	1.7%	4,909,268	80,065	1.6%	1,036,200	18,215	1.8%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]								1.6%			2.0%			-0.4%	-20,082

Note: Minority = Am.Indian/Alaska Native Alone + Native Hawaiian/Pacific Islander Alone + American Indian/White + American Indian/African American

Occupations w/Shortfall:	20
Occupations with Shortfall / 27 Occupations:	74.1%

Appendix Table A.5
Persons with More than Two Races or Other Races in On-Site Construction Occupations in
the Construction Industry and Other Industries, 2000 Census EEO Special Tabulation

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	Occupation	Employment in the Construction Industry			All Industries			Construction Industry			Industries Other than Construction			% Minority in Construction Industry - % Minority in Other Industries	Shortfall in Minority Workers in Construction Industry Compared to their Representation in Other Industries
	2002 Census Occupation Title	Total Workers	% of Total Workers	Cumulative %	Total Workers	Minority Workers	Minority %	Total Workers	Minority Workers	Minority %	Total Workers	Minority Workers	Minority %		
(1)	676 Carpenters	1,147,954	23.4%	23.4%	1,304,505	10,255	0.8%	1,147,954	8,760	0.8%	156,551	1,495	1.0%	-0.2%	-2,203
(2)	677 Construction laborers	1,005,274	20.5%	43.9%	1,067,920	9,073	0.8%	1,005,274	8,620	0.9%	62,646	453	0.7%	0.1%	1,351
(3)	635 Electricians	442,645	9.0%	52.9%	681,315	4,750	0.7%	442,645	3,110	0.7%	238,670	1,640	0.7%	0.0%	68
(4)	642 Painters, construction & maintenance	430,559	8.8%	61.6%	495,320	5,740	1.2%	430,559	5,080	1.2%	64,761	660	1.0%	0.2%	692
(5)	643 Pipelayers, plumbers, pipefitters, & steamfitters	383,299	7.8%	69.5%	509,440	3,450	0.7%	383,299	2,695	0.7%	126,141	755	0.6%	0.1%	401
(6)	632 Misc. construction equipment operators	249,414	5.1%	74.5%	311,760	1,573	0.5%	249,414	1,215	0.5%	62,346	358	0.6%	-0.1%	-217
(7)	633 Roofers	184,264	3.8%	78.3%	189,525	1,804	1.0%	184,264	1,780	1.0%	5,261	24	0.5%	0.5%	939
(8)	634 Brickmasons, blockmasons, & stonemasons	178,214	3.6%	81.9%	187,880	1,459	0.8%	178,214	1,370	0.8%	9,666	89	0.9%	-0.2%	-271
(9)	635 Drywall installers, ceiling tile installers, & tapers	166,299	3.4%	85.3%	170,665	1,154	0.7%	166,299	1,085	0.7%	4,366	69	1.6%	-0.9%	-1,543
(10)	636 Carpet, floor, and tile installers & finishers	162,085	3.3%	88.6%	209,900	1,877	0.9%	162,085	1,295	0.8%	47,815	582	1.2%	-0.4%	-678
(11)	637 Sheet metal workers	80,730	1.6%	90.3%	150,150	861	0.6%	80,730	415	0.5%	69,420	446	0.6%	-0.1%	-104
(12)	638 Cement masons, concrete finishers, & terrazo workers	75,804	1.5%	91.8%	79,850	450	0.6%	75,804	440	0.6%	4,046	10	0.2%	0.3%	253
(13)	673 Highway Maintenance Workers	75,700	1.5%	93.3%	84,649	383	0.5%	75,700	325	0.4%	8,949	58	0.6%	-0.2%	-166
(14)	660 Helpers, construction trades	56,310	1.1%	94.5%	64,620	500	0.8%	56,310	375	0.7%	8,310	125	1.5%	-0.8%	-472

(15)	661	Structural iron and steel workers	56,183	1.1%	95.6%	74,290	568	0.8%	56,183	394	0.7%	18,107	174	1.0%	-0.3%	-146
(16)	646	Plasterers & stucco masons	38,408	0.8%	96.4%	39,180	398	1.0%	38,408	369	1.0%	772	29	3.8%	-2.8%	-1,074
(17)	640	Insulation workers	33,540	0.7%	97.1%	37,705	195	0.5%	33,540	175	0.5%	4,165	20	0.5%	0.0%	14
(18)	666	Construction & building inspectors	25,050	0.5%	97.6%	75,465	459	0.6%	25,050	195	0.8%	50,415	264	0.5%	0.3%	64
(19)	670	Elevator Installers & repairers	22,528	0.5%	98.1%	25,790	229	0.9%	22,528	190	0.8%	3,262	39	1.2%	-0.4%	-79
(20)	671	Fence erectors	21,724	0.4%	98.5%	26,515	221	0.8%	21,724	185	0.9%	4,791	36	0.8%	0.1%	22
(21)	676	Misc. construction & related workers	18,814	0.4%	98.9%	29,850	326	1.1%	18,814	275	1.5%	11,036	51	0.5%	1.0%	188
(22)	677	Glaziers	17,163	0.3%	99.2%	42,564	437	1.0%	17,163	169	1.0%	25,401	268	1.1%	-0.1%	-12
(23)	678	Paperhangers	14,611	0.3%	99.5%	16,500	79	0.5%	14,611	65	0.4%	1,889	14	0.7%	-0.3%	-43
(24)	630	Paving, surfacing, & tamping equipment operators	12,874	0.3%	99.8%	13,505	109	0.8%	12,874	90	0.7%	631	19	3.0%	-2.3%	-298
(25)	621	Boilermakers	5,774	0.1%	99.9%	18,385	69	0.4%	5,774	10	0.2%	12,611	59	0.5%	-0.3%	-17
(26)	672	Hazardous materials removal workers	2,804	0.1%	100.0%	19,110	291	1.5%	2,804	49	1.7%	16,306	242	1.5%	0.3%	7
(27)	675	Septic tank servicers & sewer pipe cleaners	1,244	0.0%	100.0%	7,620	74	1.0%	1,244	10	0.8%	6,376	64	1.0%	-0.2%	-2
(28)	TOTAL		4,909,268	100.0%	100.0%	5,933,978	46,784	0.8%	4,909,268	38,741	0.8%	1,024,710	8,043	0.8%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]								0.8%			0.9%			-0.1%	-3,325

Note: Minority = Two Plus Races or Other Races

Occupations w/Shortfall:	17
Occupations with Shortfall / 27 Occupations:	63.0%

Appendix Table A.6
White Non-Hispanics in On-Site Construction Occupations in the Construction
Industry and Other Industries, 2000 Census EEO Special Tabulation

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	Occupation	Employment in the Construction Industry			All Industries			Construction Industry			Industries Other than Construction			% Wh. Non-Hisp. in Construction Industry - % Wh. Non-Hisp. in Other Industries	Shortfall in Wh. Non-Hisp. Workers in Construction Industry Compared to their Representation in Other Industries
		Total Workers	% of Total Workers	Cumulative %	Total Workers	White non-Hispanic Workers	White non-Hisp. %	Total Workers	White non-Hispanic Workers	White non-Hisp. %	Total Workers	White non-Hispanic Workers	White non-Hisp. %		
(1)	676 Carpenters	1,147,954	23.4%	23.4%	1,304,505	1,005,851	77.1%	1,147,954	892,935	77.8%	156,551	112,916	72.1%	5.7%	64,947
(2)	677 Construction laborers	1,005,274	20.5%	43.9%	1,067,920	624,480	58.5%	1,005,274	585,575	58.3%	62,646	38,905	62.1%	-3.9%	-38,730
(3)	635 Electricians	442,645	9.0%	52.9%	681,315	559,634	82.1%	442,645	364,595	82.4%	238,670	195,039	81.7%	0.6%	2,869
(4)	642 Painters, construction & maintenance	430,559	8.8%	61.6%	495,320	317,508	64.1%	430,559	277,580	64.5%	64,761	39,928	61.7%	2.8%	12,121
(5)	643 Pipelayers, plumbers, pipefitters, & steamfitters	383,299	7.8%	69.5%	509,440	402,065	78.9%	383,299	304,060	79.3%	126,141	98,005	77.7%	1.6%	6,257
(6)	632 Misc. construction equipment operators	249,414	5.1%	74.5%	311,760	254,388	81.6%	249,414	204,305	81.9%	62,346	50,083	80.3%	1.6%	3,949
(7)	633 Roofers	184,264	3.8%	78.3%	189,525	115,689	61.0%	184,264	112,390	61.0%	5,261	3,299	62.7%	-1.7%	-3,156
(8)	634 Brickmasons, blockmasons, & stonemasons	178,214	3.6%	81.9%	187,880	124,963	66.5%	178,214	118,030	66.2%	9,666	6,933	71.7%	-5.5%	-9,795
(9)	635 Drywall installers, ceiling tile installers, & tapers	166,299	3.4%	85.3%	170,665	106,387	62.3%	166,299	103,675	62.3%	4,366	2,712	62.1%	0.2%	376
(10)	636 Carpet, floor, and tile installers & finishers	162,085	3.3%	88.6%	209,900	146,907	70.0%	162,085	116,640	72.0%	47,815	30,267	63.3%	8.7%	14,040
(11)	637 Sheet metal workers	80,730	1.6%	90.3%	150,150	122,850	81.8%	80,730	67,865	84.1%	69,420	54,985	79.2%	4.9%	3,922
(12)	638 Cement masons, concrete finishers, & terrazo workers	75,804	1.5%	91.8%	79,850	43,306	54.2%	75,804	40,970	54.0%	4,046	2,336	57.7%	-3.7%	-2,796
(13)	673 Highway Maintenance Workers	75,700	1.5%	93.3%	84,649	68,369	80.8%	75,700	58,765	77.6%	8,949	9,604	107.3%	-29.7%	-22,476
(14)	660 Helpers, construction trades	56,310	1.1%	94.5%	64,620	37,322	57.8%	56,310	32,705	58.1%	8,310	4,617	55.6%	2.5%	1,419

(15)	661	Structural iron and steel workers	56,183	1.1%	95.6%	74,290	58,870	79.2%	56,183	44,515	79.2%	18,107	14,355	79.3%	0.0%	-26
(16)	646	Plasterers & stucco masons	38,408	0.8%	96.4%	39,180	19,220	49.1%	38,408	18,555	48.3%	772	665	86.1%	-37.8%	-14,530
(17)	640	Insulation workers	33,540	0.7%	97.1%	37,705	25,091	66.5%	33,540	22,435	66.9%	4,165	2,656	63.8%	3.1%	1,047
(18)	666	Construction & building inspectors	25,050	0.5%	97.6%	75,465	61,960	82.1%	25,050	20,455	81.7%	50,415	41,505	82.3%	-0.7%	-168
(19)	670	Elevator Installers & repairers	22,528	0.5%	98.1%	25,790	21,663	84.0%	22,528	19,395	86.1%	3,262	2,268	69.5%	16.6%	3,732
(20)	671	Fence erectors	21,724	0.4%	98.5%	26,515	18,055	68.1%	21,724	14,710	67.7%	4,791	3,345	69.8%	-2.1%	-457
(21)	676	Misc. construction & related workers	18,814	0.4%	98.9%	29,850	20,861	69.9%	18,814	12,780	67.9%	11,036	8,081	73.2%	-5.3%	-996
(22)	677	Glaziers	17,163	0.3%	99.2%	42,564	35,578	83.6%	17,163	13,975	81.4%	25,401	21,603	85.0%	-3.6%	-622
(23)	678	Paperhangers	14,611	0.3%	99.5%	16,500	14,536	88.1%	14,611	13,130	89.9%	1,889	1,406	74.4%	15.4%	2,255
(24)	630	Paving, surfacing, & tamping equipment operators	12,874	0.3%	99.8%	13,505	8,994	66.6%	12,874	8,570	66.6%	631	424	67.2%	-0.6%	-81
(25)	621	Boilermakers	5,774	0.1%	99.9%	18,385	14,582	79.3%	5,774	5,040	87.3%	12,611	9,542	75.7%	11.6%	671
(26)	672	Hazardous materials removal workers	2,804	0.1%	100.0%	19,110	10,704	56.0%	2,804	1,305	46.5%	16,306	9,399	57.6%	-11.1%	-311
(27)	675	Septic tank servicers & sewer pipe cleaners	1,244	0.0%	100.0%	7,620	6,080	79.8%	1,244	905	72.7%	6,376	5,175	81.2%	-8.4%	-105
(28)	TOTAL		4,909,268	100.0%	100.0%	5,933,978	4,245,913	71.6%	4,909,268	3,475,860	70.8%	1,024,710	770,053	75.1%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]								70.8%			70.3%			0.5%	23,357

Note: Hispanics = White Hispanic + All Other Hispanics

Occupations w/Shortfall:	14
Occupations with Shortfall / 27 Occupations:	51.9%

Appendix Table A.7
Hispanics in On-Site Construction Occupations in the Construction
Industry and Other Industries, 2000 Census EEO Special Tabulation

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	Occupation		Employment in the Construction Industry			All Industries			Construction Industry			Industries Other than Construction			% Hispanic in Construction Industry - % Hispanic in Other Industries	Shortfall in Hispanic Workers in Construction Industry Compared to their Representation in Other Industries
			Total Workers	% of Total Workers	Cumulative %	Total Workers	Hispanic Workers	Hispanic %	Total Workers	Hispanic Workers	Hispanic %	Total Workers	Hispanic Workers	Hispanic %		
(1)	676	Carpenters	1,147,954	23.4%	23.4%	1,304,505	195,342	15.0%	1,147,954	169,640	14.8%	156,551	25,702	16.4%	-1.6%	-18,827
(2)	677	Construction laborers	1,005,274	20.5%	43.9%	1,067,920	312,071	29.2%	1,005,274	299,675	29.8%	62,646	12,396	19.8%	10.0%	100,758
(3)	635	Electricians	442,645	9.0%	52.9%	681,315	57,585	8.5%	442,645	40,010	9.0%	238,670	17,575	7.4%	1.7%	7,415
(4)	642	Painters, construction & maintenance	430,559	8.8%	61.6%	495,320	123,913	25.0%	430,559	110,180	25.6%	64,761	13,733	21.2%	4.4%	18,877
(5)	643	Pipelayers, plumbers, pipefitters, & steamfitters	383,299	7.8%	69.5%	509,440	58,826	11.5%	383,299	46,440	12.1%	126,141	12,386	9.8%	2.3%	8,803
(6)	632	Misc. construction equipment operators	249,414	5.1%	74.5%	311,760	28,288	9.1%	249,414	23,415	9.4%	62,346	4,873	7.8%	1.6%	3,921
(7)	633	Roofers	184,264	3.8%	78.3%	189,525	53,733	28.4%	184,264	52,725	28.6%	5,261	1,008	19.2%	9.5%	17,420
(8)	634	Brickmasons, blockmasons, & stonemasons	178,214	3.6%	81.9%	187,880	35,835	19.1%	178,214	34,675	19.5%	9,666	1,160	12.0%	7.5%	13,288
(9)	635	Drywall installers, ceiling tile installers, & tapers	166,299	3.4%	85.3%	170,665	50,650	29.7%	166,299	49,755	29.9%	4,366	895	20.5%	9.4%	15,665
(10)	636	Carpet, floor, and tile installers & finishers	162,085	3.3%	88.6%	209,900	46,182	22.0%	162,085	33,350	20.6%	47,815	12,832	26.8%	-6.3%	-10,148
(11)	637	Sheet metal workers	80,730	1.6%	90.3%	150,150	14,127	9.4%	80,730	7,015	8.7%	69,420	7,112	10.2%	-1.6%	-1,256
(12)	638	Cement masons, concrete finishers, & terrazo workers	75,804	1.5%	91.8%	79,850	22,636	28.3%	75,804	21,785	28.7%	4,046	851	21.0%	7.7%	5,841
(13)	673	Highway Maintenance Workers	75,700	1.5%	93.3%	84,649	8,165	9.6%	75,700	7,145	9.4%	8,949	1,020	11.4%	-2.0%	-1,483
(14)	660	Helpers, construction trades	56,310	1.1%	94.5%	64,620	19,125	29.6%	56,310	16,825	29.9%	8,310	2,300	27.7%	2.2%	1,240

(15)	661	Structural iron and steel workers	56,183	1.1%	95.6%	74,290	8,130	10.9%	56,183	6,130	10.9%	18,107	2,000	11.0%	-0.1%	-76
(16)	646	Plasterers & stucco masons	38,408	0.8%	96.4%	39,180	15,388	39.3%	38,408	15,200	39.6%	772	188	24.4%	15.2%	5,847
(17)	640	Insulation workers	33,540	0.7%	97.1%	37,705	8,546	22.7%	33,540	7,775	23.2%	4,165	771	18.5%	4.7%	1,566
(18)	666	Construction & building inspectors	25,050	0.5%	97.6%	75,465	4,758	6.3%	25,050	1,780	7.1%	50,415	2,978	5.9%	1.2%	300
(19)	670	Elevator Installers & repairers	22,528	0.5%	98.1%	25,790	2,107	8.2%	22,528	1,650	7.3%	3,262	457	14.0%	-6.7%	-1,506
(20)	671	Fence erectors	21,724	0.4%	98.5%	26,515	5,884	22.2%	21,724	5,040	23.2%	4,791	844	17.6%	5.6%	1,213
(21)	676	Misc. construction & related workers	18,814	0.4%	98.9%	29,850	5,413	18.1%	18,814	3,765	20.0%	11,036	1,648	14.9%	5.1%	956
(22)	677	Glaziers	17,163	0.3%	99.2%	42,564	5,030	11.8%	17,163	1,800	10.5%	25,401	3,230	12.7%	-2.2%	-382
(23)	678	Paperhangers	14,611	0.3%	99.5%	16,500	1,159	7.0%	14,611	950	6.5%	1,889	209	11.1%	-4.6%	-667
(24)	630	Paving, surfacing, & tamping equipment operators	12,874	0.3%	99.8%	13,505	2,366	17.5%	12,874	2,285	17.7%	631	81	12.8%	4.9%	632
(25)	621	Boilermakers	5,774	0.1%	99.9%	18,385	1,510	8.2%	5,774	269	4.7%	12,611	1,241	9.8%	-5.2%	-299
(26)	672	Hazardous materials removal workers	2,804	0.1%	100.0%	19,110	5,359	28.0%	2,804	1,029	36.7%	16,306	4,330	26.6%	10.1%	284
(27)	675	Septic tank servicers & sewer pipe cleaners	1,244	0.0%	100.0%	7,620	601	7.9%	1,244	140	11.3%	6,376	461	7.2%	4.0%	50
(28)	TOTAL		4,909,268	100.0%	100.0%	5,933,978	1,092,729	18.4%	4,909,268	960,448	19.6%	1,024,710	132,281	12.9%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]								19.6%			16.1%			3.5%	169,432

Note: Hispanics = White Hispanic + All Other Hispanics

Occupations w/Shortfall:	9
Occupations with Shortfall / 27 Occupations:	33.3%

APPENDIX B

Appendix Table B.1
Women in On-site Construction Occupations in the Construction Industry and
Other Industries, 2006-2008 Census American Community Survey

(a)			(b)			(c)			(d)			(e)			(f)			(g)			(h)			(i)			(j)			(k)			(l)			(m)			(n)			(o)			(p)		
Occupation						Total Employment in the Construction Industry				Utilization of Women												Under-Utilization of Women																									
										All Industries			Construction Industry			Industries Other than Construction			Female % in Construction Industry - Female % in Other		Shortfall in Women in Construction Industry																										
						Total Workers	% of Total Workers	Cumu- lative %	Total Workers	Female Workers	Female %	Total Workers	Female Workers	Female %	Total Workers	Female Workers	Female %																														
(1)	6260	Construction Laborers	2,285,323	26.8%	26.8%	2,404,650	88,856	3.7%	2,285,323	81,668	3.6%	119,327	7,188	6.0%	-2.5%	-55,995																															
(2)	6230	Carpenters	1,809,344	21.2%	48.0%	2,017,399	39,444	2.0%	1,809,344	30,435	1.7%	208,055	9,009	4.3%	-2.6%	-47,911																															
(3)	6420	Painters, Construction & Maintenance	764,618	9.0%	57.0%	857,509	72,287	8.4%	764,618	61,450	8.0%	92,891	10,837	11.7%	-3.6%	-27,753																															
(4)	6350	Electricians	690,383	8.1%	65.1%	968,180	23,823	2.5%	690,383	12,333	1.8%	277,797	11,490	4.1%	-2.3%	-16,222																															
(5)	6440	Pipelayers, Plumbers, Pipefitters & Steamfitters	580,426	6.8%	71.9%	739,593	12,944	1.8%	580,426	8,906	1.5%	159,167	4,038	2.5%	-1.0%	-5,819																															
(6)	6320	Construction Equipment Operators, except Paving	417,694	4.9%	76.8%	517,416	12,786	2.5%	417,694	8,796	2.1%	99,722	3,990	4.0%	-1.9%	-7,916																															
(7)	6510	Roofers	315,096	3.7%	80.5%	322,054	5,001	1.6%	315,096	4,767	1.5%	6,958	234	3.4%	-1.9%	-5,830																															
(8)	6220	Brickmasons, Blockmasons & Stonemasons	275,634	3.2%	83.7%	287,724	2,985	1.0%	275,634	2,675	1.0%	12,090	310	2.6%	-1.6%	-4,393																															
(9)	6330	Drywall Installers, Ceiling Tile Installers & Tapers	264,370	3.1%	86.8%	269,496	7,601	2.8%	264,370	7,313	2.8%	5,126	288	5.6%	-2.9%	-7,540																															
(10)	6240	Carpet, Floor & Tile Installers & Finishers	253,368	3.0%	89.8%	299,286	8,349	2.8%	253,368	6,502	2.6%	45,918	1,847	4.0%	-1.5%	-3,689																															
(11)	6600	Helpers, Construction Trades	130,210	1.5%	91.3%	141,276	7,001	5.0%	130,210	6,003	4.6%	11,066	998	9.0%	-4.4%	-5,740																															
(12)	6250	Cement Masons, Concrete Finishers & Terrazzo Workers	120,308	1.4%	92.7%	125,137	1,232	1.0%	120,308	1,197	1.0%	4,829	35	0.7%	0.3%	325																															
(13)	6730	Highway Maintenance Workers	111,078	1.3%	94.0%	123,524	4,457	3.6%	111,078	3,836	3.5%	12,446	621	5.0%	-1.5%	-1,706																															

(14)	6520	Sheet Metal Workers	87,318	1.0%	95.0%	171,306	7,903	4.6%	87,318	2,307	2.6%	83,988	5,596	6.7%	-4.0%	-3,511
(15)	6530	Structural Iron & Steel Workers	67,184	0.8%	95.8%	89,219	1,845	2.1%	67,184	990	1.5%	22,035	855	3.9%	-2.4%	-1,617
(16)	6460	Plasterers & Stucco Masons	60,155	0.7%	96.5%	61,283	1,014	1.7%	60,155	924	1.5%	1,128	90	8.0%	-6.4%	-3,876
(17)	6400	Insulation Workers	51,329	0.6%	97.1%	57,213	2,435	4.3%	51,329	1,951	3.8%	5,884	484	8.2%	-4.4%	-2,271
(18)	6660	Construction & Building Inspectors	40,259	0.5%	97.6%	127,734	14,539	11.4%	40,259	3,434	8.5%	87,475	11,105	12.7%	-4.2%	-1,677
(19)	6760	Miscellaneous Construction Workers, Including Septic	37,813	0.4%	98.0%	66,448	2,720	4.1%	37,813	1,303	3.4%	28,635	1,417	4.9%	-1.5%	-568
(20)	6710	Fence Erectors	38,308	0.4%	98.5%	44,778	1,401	3.1%	38,308	1,107	2.9%	6,470	294	4.5%	-1.7%	-634
(21)	6360	Glaziers	36,108	0.4%	98.9%	56,872	1,045	1.8%	36,108	480	1.3%	20,764	565	2.7%	-1.4%	-503
(22)	6300	Paving, Surfacing & Tamping Equipment Operators	27,137	0.3%	99.2%	27,786	855	3.1%	27,137	697	2.6%	649	158	24.3%	-21.8%	-5,910
(23)	6700	Elevator Installers & Repairers	26,031	0.3%	99.5%	32,710	665	2.0%	26,031	398	1.5%	6,679	267	4.0%	-2.5%	-643
(24)	6430	Paperhangers	11,418	0.1%	99.7%	13,023	3,508	26.9%	11,418	3,211	28.1%	1,605	297	18.5%	9.6%	1,098
(25)	6500	Reinforcing Iron & Rebar Workers	11,847	0.1%	99.8%	13,626	235	1.7%	11,847	195	1.6%	1,779	40	2.2%	-0.6%	-71
(26)	6210	Boilermakers	11,457	0.1%	99.9%	25,989	381	1.5%	11,457	170	1.5%	14,532	211	1.5%	0.0%	4
(27)	6720	Hazardous Materials Removal Workers	5,171	0.1%	100.0%	38,701	6,288	16.2%	5,171	630	12.2%	33,530	5,658	16.9%	-4.7%	-243
(28)	TOTAL		8,529,387	100.0%	100.0%	9,899,932	331,600	3.3%	8,529,387	253,678	3.0%	1,370,545	77,922	5.7%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]								3.0%			5.4%			-2.5%	-210,611

Occupations w/Shortfall:	24
Occupations with Shortfall / 27 Occupations:	88.9%

Appendix Table B.2
African American Construction Trade Workers in the Construction
Industry and Other Industries, 2006-2008 Census American Community Survey

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	Occupation	Employment in the Construction Industry			All Industries			Construction Industry			Industries Other than Construction			% Black in Construction Industry - % Black in Other Industries	Shortfall in Black Workers in Construction Industry Compared to their Representation in Other Industries
		Total Workers	% of Total Workers	Cumulative %	Total Workers	Black Workers	Black %	Total Workers	Black Workers	Black %	Total Workers	Black Workers	Black %		
(1)	6260 Construction Laborers	2,285,323	26.8%	26.8%	2,404,650	237,893	9.9%	2,285,323	217,886	9.5%	119,327	20,007	16.8%	-7.2%	-165,283
(2)	6230 Carpenters	1,809,344	21.2%	48.0%	2,017,399	112,029	5.6%	1,809,344	96,485	5.3%	208,055	15,544	7.5%	-2.1%	-38,693
(3)	6420 Painters, Construction & Maintenance	764,618	9.0%	57.0%	857,509	67,116	7.8%	764,618	53,796	7.0%	92,891	13,320	14.3%	-7.3%	-55,846
(4)	6350 Electricians	690,383	8.1%	65.1%	968,180	73,599	7.6%	690,383	47,379	6.9%	277,797	26,220	9.4%	-2.6%	-17,783
(5)	6440 Pipelayers, Plumbers, Pipefitters & Steamfitters	580,426	6.8%	71.9%	739,593	59,738	8.1%	580,426	41,462	7.1%	159,167	18,276	11.5%	-4.3%	-25,184
(6)	6320 Construction Equipment Operators, except Paving	417,694	4.9%	76.8%	517,416	34,797	6.7%	417,694	25,947	6.2%	99,722	8,850	8.9%	-2.7%	-11,122
(7)	6510 Roofers	315,096	3.7%	80.5%	322,054	27,786	8.6%	315,096	26,716	8.5%	6,958	1,070	15.4%	-6.9%	-21,739
(8)	6220 Brickmasons, Blockmasons & Stonemasons	275,634	3.2%	83.7%	287,724	37,201	12.9%	275,634	35,647	12.9%	12,090	1,554	12.9%	0.1%	218
(9)	6330 Drywall Installers, Ceiling Tile Installers & Tapers	264,370	3.1%	86.8%	269,496	17,759	6.6%	264,370	17,138	6.5%	5,126	621	12.1%	-5.6%	-14,890
(10)	6240 Carpet, Floor & Tile Installers & Finishers	253,368	3.0%	89.8%	299,286	16,417	5.5%	253,368	13,179	5.2%	45,918	3,238	7.1%	-1.9%	-4,688
(11)	6600 Helpers, Construction Trades	130,210	1.5%	91.3%	141,276	15,453	10.9%	130,210	14,040	10.8%	11,066	1,413	12.8%	-2.0%	-2,586
(12)	6250 Cement Masons, Concrete Finishers & Terrazzo Workers	120,308	1.4%	92.7%	125,137	18,269	14.6%	120,308	17,371	14.4%	4,829	898	18.6%	-4.2%	-5,001
(13)	6730 Highway Maintenance Workers	111,078	1.3%	94.0%	123,524	14,983	12.1%	111,078	13,561	12.2%	12,446	1,422	11.4%	0.8%	870

(14)	6520 Sheet Metal Workers	87,318	1.0%	95.0%	171,306	12,565	7.3%	87,318	5,949	6.8%	83,988	6,616	7.9%	-1.1%	-929
(15)	6530 Structural Iron & Steel Workers	67,184	0.8%	95.8%	89,219	6,733	7.5%	67,184	4,264	6.3%	22,035	2,469	11.2%	-4.9%	-3,264
(16)	6460 Plasterers & Stucco Masons	60,155	0.7%	96.5%	61,283	6,932	11.3%	60,155	6,530	10.9%	1,128	402	35.6%	-24.8%	-14,908
(17)	6400 Insulation Workers	51,329	0.6%	97.1%	57,213	5,165	9.0%	51,329	4,219	8.2%	5,884	946	16.1%	-7.9%	-4,033
(18)	6660 Construction & Building Inspectors	40,259	0.5%	97.6%	127,734	10,639	8.3%	40,259	3,211	8.0%	87,475	7,428	8.5%	-0.5%	-208
(19)	6760 Miscellaneous Construction Workers, Including Septic	37,813	0.4%	98.0%	66,448	6,979	10.5%	37,813	4,279	11.3%	28,635	2,700	9.4%	1.9%	714
(20)	6710 Fence Erectors	38,308	0.4%	98.5%	44,778	2,713	6.1%	38,308	2,113	5.5%	6,470	600	9.3%	-3.8%	-1,440
(21)	6360 Glaziers	36,108	0.4%	98.9%	56,872	2,921	5.1%	36,108	1,481	4.1%	20,764	1,440	6.9%	-2.8%	-1,023
(22)	6300 Paving, Surfacing & Tamping Equipment Operators	27,137	0.3%	99.2%	27,786	2,903	10.4%	27,137	2,881	10.6%	649	22	3.4%	7.2%	1,961
(23)	6700 Elevator Installers & Repairers	26,031	0.3%	99.5%	32,710	1,950	6.0%	26,031	1,537	5.9%	6,679	413	6.2%	-0.3%	-73
(24)	6430 Paperhangers	11,418	0.1%	99.7%	13,023	504	3.9%	11,418	249	2.2%	1,605	255	15.9%	-13.7%	-1,565
(25)	6500 Reinforcing Iron & Rebar Workers	11,847	0.1%	99.8%	13,626	964	7.1%	11,847	728	6.1%	1,779	236	13.3%	-7.1%	-844
(26)	6210 Boilermakers	11,457	0.1%	99.9%	25,989	2,000	7.7%	11,457	843	7.4%	14,532	1,157	8.0%	-0.6%	-69
(27)	6720 Hazardous Materials Removal Workers	5,171	0.1%	100.0%	38,701	6,689	17.3%	5,171	623	12.0%	33,530	6,066	18.1%	-6.0%	-312
(28)	TOTAL	8,529,387	100.0%	100.0%	9,899,932	802,697	8.1%	8,529,387	659,514	7.7%	1,370,545	143,183	10.4%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]							7.7%			12.3%			-4.5%	-387,721

Note: Black equals Black alone and combined with any other race group.

Occupations w/Shortfall:	23
Occupations with Shortfall / 27 Occupations:	85.2%

Appendix Table B.3
Asian Construction Trade Workers in the Construction
Industry and Other Industries, 2006-2008 Census American Community Survey

(a)	(b)		(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
Occupation			Employment in the Construction Industry			All Industries			Construction Industry			Industries Other than Construction			% Asian in Construction Industry - % Asian in Other Industries	Shortfall in Asian Workers in Construction Industry Compared to their Representation in Other Industries
			Total Workers	% of Total Workers	Cumulative %	Total Workers	Asian Workers	Asian %	Total Workers	Asian Workers	Asian %	Total Workers	Asian Workers	Asian %		
(1)	6260	Construction Laborers	2,285,323	26.8%	26.8%	2,404,650	9,115	0.4%	2,285,323	8,521	0.4%	119,327	594	0.5%	-0.1%	-2,855
(2)	6230	Carpenters	1,809,344	21.2%	48.0%	2,017,399	5,775	0.3%	1,809,344	4,903	0.3%	208,055	872	0.4%	-0.1%	-2,680
(3)	6420	Painters, Construction & Maintenance	764,618	9.0%	57.0%	857,509	3,403	0.4%	764,618	2,985	0.4%	92,891	418	0.4%	-0.1%	-456
(4)	6350	Electricians	690,383	8.1%	65.1%	968,180	4,723	0.5%	690,383	2,783	0.4%	277,797	1,940	0.7%	-0.3%	-2,038
(5)	6440	Pipelayers, Plumbers, Pipefitters & Steamfitters	580,426	6.8%	71.9%	739,593	1,861	0.3%	580,426	1,166	0.2%	159,167	695	0.4%	-0.2%	-1,368
(6)	6320	Construction Equipment Operators, except Paving	417,694	4.9%	76.8%	517,416	1,502	0.3%	417,694	1,365	0.3%	99,722	137	0.1%	0.2%	791
(7)	6510	Roofers	315,096	3.7%	80.5%	322,054	860	0.3%	315,096	860	0.3%	6,958	0	0.0%	0.3%	860
(8)	6220	Brickmasons, Blockmasons & Stonemasons	275,634	3.2%	83.7%	287,724	1,051	0.4%	275,634	944	0.3%	12,090	107	0.9%	-0.5%	-1,495
(9)	6330	Drywall Installers, Ceiling Tile Installers & Tapers	264,370	3.1%	86.8%	269,496	659	0.2%	264,370	659	0.2%	5,126	0	0.0%	0.2%	659
(10)	6240	Carpet, Floor & Tile Installers & Finishers	253,368	3.0%	89.8%	299,286	745	0.2%	253,368	666	0.3%	45,918	79	0.2%	0.1%	230
(11)	6600	Helpers, Construction Trades	130,210	1.5%	91.3%	141,276	581	0.4%	130,210	489	0.4%	11,066	92	0.8%	-0.5%	-594
(12)	6250	Cement Masons, Concrete Finishers & Terrazzo Workers	120,308	1.4%	92.7%	125,137	211	0.2%	120,308	211	0.2%	4,829	0	0.0%	0.2%	211
(13)	6730	Highway Maintenance Workers	111,078	1.3%	94.0%	123,524	147	0.1%	111,078	126	0.1%	12,446	21	0.2%	-0.1%	-61

(14)	6520	Sheet Metal Workers	87,318	1.0%	95.0%	171,306	949	0.6%	87,318	295	0.3%	83,988	654	0.8%	-0.4%	-385
(15)	6530	Structural Iron & Steel Workers	67,184	0.8%	95.8%	89,219	537	0.6%	67,184	432	0.6%	22,035	105	0.5%	0.2%	112
(16)	6460	Plasterers & Stucco Masons	60,155	0.7%	96.5%	61,283	104	0.2%	60,155	104	0.2%	1,128	0	0.0%	0.2%	104
(17)	6400	Insulation Workers	51,329	0.6%	97.1%	57,213	140	0.2%	51,329	140	0.3%	5,884	0	0.0%	0.3%	140
(18)	6660	Construction & Building Inspectors	40,259	0.5%	97.6%	127,734	930	0.7%	40,259	589	1.5%	87,475	341	0.4%	1.1%	432
(19)	6760	Miscellaneous Construction Workers, Including Septic	37,813	0.4%	98.0%	66,448	25	0.0%	37,813	25	0.1%	28,635	0	0.0%	0.1%	25
(20)	6710	Fence Erectors	38,308	0.4%	98.5%	44,778	57	0.0%	38,308	57	0.0%	6,470	0	0.0%	0.0%	0
(21)	6360	Glaziers	36,108	0.4%	98.9%	56,872	251	0.4%	36,108	169	0.5%	20,764	82	0.4%	0.1%	26
(22)	6300	Paving, Surfacing & Tamping Equipment Operators	27,137	0.3%	99.2%	27,786	20	0.0%	27,137	20	0.0%	649	0	0.0%	0.0%	0
(23)	6700	Elevator Installers & Repairers	26,031	0.3%	99.5%	32,710	88	0.3%	26,031	40	0.2%	6,679	48	0.7%	-0.6%	-147
(24)	6430	Paperhangers	11,418	0.1%	99.7%	13,023	213	1.6%	11,418	213	1.9%	1,605	0	0.0%	1.9%	213
(25)	6500	Reinforcing Iron & Rebar Workers	11,847	0.1%	99.8%	13,626	0	0.0%	11,847	0	0.0%	1,779	0	0.0%	0.0%	0
(26)	6210	Boilermakers	11,457	0.1%	99.9%	25,989	76	0.0%	11,457	0	0.0%	14,532	0	0.0%	0.0%	0
(27)	6720	Hazardous Materials Removal Workers	5,171	0.1%	100.0%	38,701	193	0.5%	5,171	70	1.4%	33,530	123	0.4%	1.0%	51
(28)	TOTAL		8,529,387	100.0%	100.0%	9,899,932	34,216	0.3%	8,529,387	27,832	0.3%	1,370,545	6,308	0.5%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]								0.3%			0.4%			-0.1%	-8,226

Note: Asian equals Asian alone and combined with any other race group.

Occupations w/Shortfall:	10
Occupations with Shortfall / 27 Occupations:	37.0%

Appendix Table B. 4
American Indian/Alaska Native and Native Hawaiian/Other Pacific Islanders
Construction Trade Workers in the Construction Industry and Other Industries,
2006-2008 Census American Community Survey

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	Occupation	Employment in the Construction Industry			All Industries			Construction Industry			Industries Other than Construction			% Indian in Construction Industry - % Indian in Other Industries	Shortfall in Indian Workers in Construction Industry Compared to their Representation in Other Industries
		Total Workers	% of Total Workers	Cumulative %	Total Workers	Indian Workers	Indian %	Total Workers	Indian Workers	Indian %	Total Workers	Indian Workers	Indian %		
(1)	6260 Construction Laborers	2,285,323	26.8%	26.8%	2,404,650	59,257	2.5%	2,285,323	54,821	2.4%	119,327	4,436	3.7%	-1.3%	-30,136
(2)	6230 Carpenters	1,809,344	21.2%	48.0%	2,017,399	42,767	2.1%	1,809,344	37,624	2.1%	208,055	5,143	2.5%	-0.4%	-7,102
(3)	6420 Painters, Construction & Maintenance	764,618	9.0%	57.0%	857,509	16,031	1.9%	764,618	14,161	1.9%	92,891	1,870	2.0%	-0.2%	-1,232
(4)	6350 Electricians	690,383	8.1%	65.1%	968,180	17,680	1.8%	690,383	12,428	1.8%	277,797	5,252	1.9%	-0.1%	-624
(5)	6440 Pipelayers, Plumbers, Pipefitters & Steamfitters	580,426	6.8%	71.9%	739,593	14,800	2.0%	580,426	10,767	1.9%	159,167	4,033	2.5%	-0.7%	-3,940
(6)	6320 Construction Equipment Operators, except Paving	417,694	4.9%	76.8%	517,416	15,434	3.0%	417,694	11,195	2.7%	99,722	4,239	4.3%	-1.6%	-6,560
(7)	6510 Roofers	315,096	3.7%	80.5%	322,054	7,239	2.2%	315,096	7,034	2.2%	6,958	205	2.9%	-0.7%	-2,250
(8)	6220 Brickmasons, Blockmasons & Stonemasons	275,634	3.2%	83.7%	287,724	7,599	2.6%	275,634	7,273	2.6%	12,090	326	2.7%	-0.1%	-159
(9)	6330 Drywall Installers, Ceiling Tile Installers & Tapers	264,370	3.1%	86.8%	269,496	6,621	2.5%	264,370	6,485	2.5%	5,126	136	2.7%	-0.2%	-529
(10)	6240 Carpet, Floor & Tile Installers & Finishers	253,368	3.0%	89.8%	299,286	5,351	1.8%	253,368	4,375	1.7%	45,918	976	2.1%	-0.4%	-1,010
(11)	6600 Helpers, Construction Trades	130,210	1.5%	91.3%	141,276	3,229	2.3%	130,210	2,948	2.3%	11,066	281	2.5%	-0.3%	-358
(12)	6250 Cement Masons, Concrete Finishers & Terrazzo Workers	120,308	1.4%	92.7%	125,137	3,252	2.6%	120,308	3,197	2.7%	4,829	55	1.1%	1.5%	1,827
(13)	6730 Highway Maintenance Workers	111,078	1.3%	94.0%	123,524	2,679	2.2%	111,078	2,376	2.1%	12,446	303	2.4%	-0.3%	-328

(14)	6520 Sheet Metal Workers	87,318	1.0%	95.0%	171,306	2,265	1.3%	87,318	1,230	1.4%	83,988	1,035	1.2%	0.2%	154
(15)	6530 Structural Iron & Steel Workers	67,184	0.8%	95.8%	89,219	3,490	3.9%	67,184	3,042	4.5%	22,035	448	2.0%	2.5%	1,676
(16)	6460 Plasterers & Stucco Masons	60,155	0.7%	96.5%	61,283	725	1.2%	60,155	725	1.2%	1,128	0	0.0%	1.2%	725
(17)	6400 Insulation Workers	51,329	0.6%	97.1%	57,213	1,188	2.1%	51,329	1,070	2.1%	5,884	118	2.0%	0.1%	41
(18)	6660 Construction & Building Inspectors	40,259	0.5%	97.6%	127,734	2,354	1.8%	40,259	1,074	2.7%	87,475	1,280	1.5%	1.2%	485
(19)	6760 Miscellaneous Construction Workers, Including Septic	37,813	0.4%	98.0%	66,448	1,272	1.9%	37,813	621	1.6%	28,635	651	2.3%	-0.6%	-239
(20)	6710 Fence Erectors	38,308	0.4%	98.5%	44,778	1,126	2.5%	38,308	937	2.4%	6,470	189	2.9%	-0.5%	-182
(21)	6360 Glaziers	36,108	0.4%	98.9%	56,872	757	1.3%	36,108	490	1.4%	20,764	267	1.3%	0.1%	26
(22)	6300 Paving, Surfacing & Tamping Equipment Operators	27,137	0.3%	99.2%	27,786	741	2.7%	27,137	665	2.5%	649	76	11.7%	-9.3%	-2,513
(23)	6700 Elevator Installers & Repairers	26,031	0.3%	99.5%	32,710	188	0.6%	26,031	88	0.3%	6,679	100	1.5%	-1.2%	-302
(24)	6430 Paperhangers	11,418	0.1%	99.7%	13,023	86	0.7%	11,418	50	0.4%	1,605	36	2.2%	-1.8%	-206
(25)	6500 Reinforcing Iron & Rebar Workers	11,847	0.1%	99.8%	13,626	517	3.8%	11,847	481	4.1%	1,779	36	2.0%	2.0%	241
(26)	6210 Boilermakers	11,457	0.1%	99.9%	25,989	706	2.7%	11,457	327	2.9%	14,532	379	2.6%	0.2%	28
(27)	6720 Hazardous Materials Removal Workers	5,171	0.1%	100.0%	38,701	1,245	3.2%	5,171	79	1.5%	33,530	1,166	3.5%	-1.9%	-101
(28)	TOTAL	8,529,387	100.0%	100.0%	9,899,932	218,599	2.2%	8,529,387	185,563	2.2%	1,370,545	33,036	2.4%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]							2.2%			2.8%			-0.6%	-52,569

Note: Amer. Indians/Alaska Natives and Nat. Haw/Pac Is. equals Amer. Indians/Alaska Natives and Nat. Haw/Pac Is. alone and combined with any other race group.

Occupations w/Shortfall:	18
Occupations with Shortfall / 27 Occupations:	66.7%

Appendix Table B.5
Construction Trade Workers of More than Two Races or Other Races in the Construction Industry and Other Industries, 2006-2008 Census American Community Survey

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	Occupation	Employment in the Construction Industry			All Industries			Construction Industry			Industries Other than Construction			% Minority in Construction Industry - % Minority in Other Industries	Shortfall in Minority Workers in Construction Industry Compared to their Representation in Other Industries
		Total Workers	% of Total Workers	Cumulative %	Total Workers	Minority Workers	Two Race %	Total Workers	Minority Workers	Two Race %	Total Workers	Minority Workers	Two Race %		
(1)	6260 Construction Laborers	2,285,323	26.8%	26.8%	2,404,650	38,360	1.6%	2,285,323	35,643	1.6%	119,327	2,717	2.3%	-0.7%	-16,392
(2)	6230 Carpenters	1,809,344	21.2%	48.0%	2,017,399	28,590	1.4%	1,809,344	25,860	1.4%	208,055	2,730	1.3%	0.1%	2,119
(3)	6420 Painters, Construction & Maintenance	764,618	9.0%	57.0%	857,509	14,055	1.6%	764,618	12,379	1.6%	92,891	1,676	1.8%	-0.2%	-1,417
(4)	6350 Electricians	690,383	8.1%	65.1%	968,180	13,613	1.4%	690,383	9,931	1.4%	277,797	3,682	1.3%	0.1%	780
(5)	6440 Pipelayers, Plumbers, Pipefitters & Steamfitters	580,426	6.8%	71.9%	739,593	10,776	1.5%	580,426	8,898	1.5%	159,167	1,878	1.2%	0.4%	2,050
(6)	6320 Construction Equipment Operators, except Paving	417,694	4.9%	76.8%	517,416	8,620	1.7%	417,694	7,553	1.8%	99,722	1,067	1.1%	0.7%	3,084
(7)	6510 Roofers	315,096	3.7%	80.5%	322,054	6,087	1.9%	315,096	5,904	1.9%	6,958	183	2.6%	-0.8%	-2,383
(8)	6220 Brickmasons, Blockmasons & Stonemasons	275,634	3.2%	83.7%	287,724	3,725	1.3%	275,634	3,616	1.3%	12,090	109	0.9%	0.4%	1,131
(9)	6330 Drywall Installers, Ceiling Tile Installers & Tapers	264,370	3.1%	86.8%	269,496	3,523	1.3%	264,370	3,445	1.3%	5,126	78	1.5%	-0.2%	-578
(10)	6240 Carpet, Floor & Tile Installers & Finishers	253,368	3.0%	89.8%	299,286	4,848	1.6%	253,368	3,981	1.6%	45,918	867	1.9%	-0.3%	-803
(11)	6600 Helpers, Construction Trades	130,210	1.5%	91.3%	141,276	2,378	1.7%	130,210	2,157	1.7%	11,066	221	2.0%	-0.3%	-443
(12)	6250 Cement Masons, Concrete Finishers & Terrazzo Workers	120,308	1.4%	92.7%	125,137	1,671	1.3%	120,308	1,671	1.4%	4,829	0	0.0%	1.4%	1,671
(13)	6730 Highway Maintenance Workers	111,078	1.3%	94.0%	123,524	1,776	1.4%	111,078	1,563	1.4%	12,446	213	1.7%	-0.3%	-338

(14)	6520	Sheet Metal Workers	87,318	1.0%	95.0%	171,306	1,976	1.2%	87,318	1,039	1.2%	83,988	937	1.1%	0.1%	65
(15)	6530	Structural Iron & Steel Workers	67,184	0.8%	95.8%	89,219	1,340	1.5%	67,184	1,063	1.6%	22,035	277	1.3%	0.3%	218
(16)	6460	Plasterers & Stucco Masons	60,155	0.7%	96.5%	61,283	759	1.2%	60,155	759	1.3%	1,128	0	0.0%	1.3%	759
(17)	6400	Insulation Workers	51,329	0.6%	97.1%	57,213	1,007	1.8%	51,329	876	1.7%	5,884	131	2.2%	-0.5%	-267
(18)	6660	Construction & Building Inspectors	40,259	0.5%	97.6%	127,734	1,280	1.0%	40,259	507	1.3%	87,475	773	0.9%	0.4%	151
(19)	6760	Miscellaneous Construction Workers, Including Septic	37,813	0.4%	98.0%	66,448	1,044	1.6%	37,813	353	0.9%	28,635	691	2.4%	-1.5%	-559
(20)	6710	Fence Erectors	38,308	0.4%	98.5%	44,778	794	1.8%	38,308	585	1.5%	6,470	209	3.2%	-1.7%	-652
(21)	6360	Glaziers	36,108	0.4%	98.9%	56,872	887	1.6%	36,108	570	1.6%	20,764	317	1.5%	0.1%	19
(22)	6300	Paving, Surfacing & Tamping Equipment Operators	27,137	0.3%	99.2%	27,786	503	1.8%	27,137	448	1.7%	649	55	8.5%	-6.8%	-1,852
(23)	6700	Elevator Installers & Repairers	26,031	0.3%	99.5%	32,710	343	1.0%	26,031	240	0.9%	6,679	103	1.5%	-0.6%	-161
(24)	6430	Paperhangers	11,418	0.1%	99.7%	13,023	82	0.6%	11,418	35	0.3%	1,605	47	2.9%	-2.6%	-299
(25)	6500	Reinforcing Iron & Rebar Workers	11,847	0.1%	99.8%	13,626	332	2.4%	11,847	287	2.4%	1,779	45	2.5%	-0.1%	-13
(26)	6210	Boilermakers	11,457	0.1%	99.9%	25,989	353	1.4%	11,457	148	1.3%	14,532	205	1.4%	-0.1%	-14
(27)	6720	Hazardous Materials Removal Workers	5,171	0.1%	100.0%	38,701	410	1.1%	5,171	25	0.5%	33,530	385	1.1%	-0.7%	-34
(28)	TOTAL		8,529,387	100.0%	100.0%	9,899,932	149,132	1.5%	8,529,387	129,536	1.5%	1,370,545	19,596	1.4%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]								1.5%			1.7%			-0.2%	-14,160

Note: Two or more races equals Two or more racial groups represented.

Occupations w/Shortfall:	16
Occupations with Shortfall / 27 Occupations:	59.3%

Appendix Table B.6
White Construction Trade Workers in the Construction
Industry and Other Industries, 2006-2008 Census American Community Survey

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
Occupation		Employment in the Construction Industry			All Industries			Construction Industry			Industries Other than Construction			% White in Construction Industry - % White in Other Industries	Shortfall in White Workers in Construction Industry Compared to their Representation in Other Industries
		Total Workers	% of Total Workers	Cumulative %	Total Workers	White Workers	White %	Total Workers	White Workers	White %	Total Workers	White Workers	White %		
(1)	6260 Construction Laborers	2,285,323	26.8%	26.8%	2,404,650	1,269,769	52.8%	2,285,323	1,201,715	52.6%	119,327	68,054	57.0%	-4.4%	-101,639
(2)	6230 Carpenters	1,809,344	21.2%	48.0%	2,017,399	1,357,212	67.3%	1,809,344	1,219,151	67.4%	208,055	138,061	66.4%	1.0%	18,508
(3)	6420 Painters, Construction & Maintenance	764,618	9.0%	57.0%	857,509	471,598	55.0%	764,618	416,278	54.4%	92,891	55,320	59.6%	-5.1%	-39,080
(4)	6350 Electricians	690,383	8.1%	65.1%	968,180	724,918	74.9%	690,383	513,588	74.4%	277,797	211,330	76.1%	-1.7%	-11,611
(5)	6440 Pipelayers, Plumbers, Pipefitters & Steamfitters	580,426	6.8%	71.9%	739,593	516,564	69.8%	580,426	407,608	70.2%	159,167	108,956	68.5%	1.8%	10,284
(6)	6320 Construction Equipment Operators, except Paving	417,694	4.9%	76.8%	517,416	400,130	77.3%	417,694	324,045	77.6%	99,722	76,085	76.3%	1.3%	5,357
(7)	6510 Roofers	315,096	3.7%	80.5%	322,054	164,253	51.0%	315,096	160,347	50.9%	6,958	3,906	56.1%	-5.2%	-16,538
(8)	6220 Brickmasons, Blockmasons & Stonemasons	275,634	3.2%	83.7%	287,724	152,064	52.9%	275,634	144,625	52.5%	12,090	7,439	61.5%	-9.1%	-24,973
(9)	6330 Drywall Installers, Ceiling Tile Installers & Tapers	264,370	3.1%	86.8%	269,496	117,404	43.6%	264,370	114,399	43.3%	5,126	3,005	58.6%	-15.4%	-40,582
(10)	6240 Carpet, Floor & Tile Installers & Finishers	253,368	3.0%	89.8%	299,286	163,330	54.6%	253,368	139,661	55.1%	45,918	23,669	51.5%	3.6%	9,059
(11)	6600 Helpers, Construction Trades	130,210	1.5%	91.3%	141,276	70,913	50.2%	130,210	65,307	50.2%	11,066	5,606	50.7%	-0.5%	-657
(12)	6250 Cement Masons, Concrete Finishers & Terrazzo Workers	120,308	1.4%	92.7%	125,137	54,307	43.4%	120,308	52,346	43.5%	4,829	1,961	0.0%	43.5%	52,346

(13)	6730	Highway Maintenance Workers	111,078	1.3%	94.0%	123,524	91,379	74.0%	111,078	81,594	73.5%	12,446	9,785	78.6%	-5.2%	-5,735
(14)	6520	Sheet Metal Workers	87,318	1.0%	95.0%	171,306	130,852	76.4%	87,318	66,726	76.4%	83,988	64,126	76.4%	0.1%	57
(15)	6530	Structural Iron & Steel Workers	67,184	0.8%	95.8%	89,219	62,867	70.5%	67,184	48,116	71.6%	22,035	14,751	66.9%	4.7%	3,141
(16)	6460	Plasterers & Stucco Masons	60,155	0.7%	96.5%	61,283	21,131	34.5%	60,155	20,656	34.3%	1,128	475	0.0%	34.3%	20,656
(17)	6400	Insulation Workers	51,329	0.6%	97.1%	57,213	32,452	56.7%	51,329	29,447	57.4%	5,884	3,005	51.1%	6.3%	3,233
(18)	6660	Construction & Building Inspectors	40,259	0.5%	97.6%	127,734	100,450	78.6%	40,259	30,104	74.8%	87,475	70,346	80.4%	-5.6%	-2,272
(19)	6760	Miscellaneous Construction Workers, Including Septic	37,813	0.4%	98.0%	66,448	44,074	66.3%	37,813	24,127	63.8%	28,635	19,947	69.7%	-5.9%	-2,213
(20)	6710	Fence Erectors	38,308	0.4%	98.5%	44,778	27,423	61.2%	38,308	23,473	61.3%	6,470	3,950	61.1%	0.2%	86
(21)	6360	Glaziers	36,108	0.4%	98.9%	56,872	42,828	75.3%	36,108	27,140	75.2%	20,764	15,688	75.6%	-0.4%	-141
(22)	6300	Paving, Surfacing & Tamping Equipment Operators	27,137	0.3%	99.2%	27,786	18,786	67.6%	27,137	18,285	67.4%	649	501	77.2%	-9.8%	-2,664
(23)	6700	Elevator Installers & Repairers	26,031	0.3%	99.5%	32,710	26,870	82.1%	26,031	21,231	81.6%	6,679	5,639	84.4%	-2.9%	-747
(24)	6430	Paperhangers	11,418	0.1%	99.7%	13,023	10,838	83.2%	11,418	9,979	87.4%	1,605	859	53.5%	33.9%	3,868
(25)	6500	Reinforcing Iron & Rebar Workers	11,847	0.1%	99.8%	13,626	8,238	60.5%	11,847	7,154	60.4%	1,779	1,084	60.9%	-0.5%	-65
(26)	6210	Boilermakers	11,457	0.1%	99.9%	25,989	20,364	78.4%	11,457	9,398	82.0%	14,532	10,966	75.5%	6.6%	752
(27)	6720	Hazardous Materials Removal Workers	5,171	0.1%	100.0%	38,701	19,576	50.6%	5,171	2,215	42.8%	33,530	17,361	51.8%	-8.9%	-462
(28)	TOTAL		8,529,387	100.0%	100.0%	9,899,932	6,120,590	61.8%	8,529,387	5,178,715	60.7%	1,370,545	941,875	68.7%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]								60.7%			62.1%			-1.4%	-122,032
											Occupations w/Shortfall:			14		
Note:White equals White Alone. Non-Hispanic.											Occupations with Shortfall / 27 Occupations:			51.9%		

Appendix Table B.7
Hispanic Construction Trade Workers in the Construction
Industry and Other Industries, 2006-2008 Census American Community Survey

(a)			(b)			(c)			(d)			(e)			(f)			(g)			(h)			(i)			(j)			(k)			(l)			(m)			(n)			(o)			(p)		
Occupation						Employment in the Construction Industry			All Industries			Construction Industry			Industries Other than Construction			% Hispanic in Construction Industry - % Hispanic in Other Industries			Shortfall in Hispanic Workers in Construction Industry Compared to their Representation in Other Industries																										
						Total Workers	% of Total Workers	Cumulative %	Total Workers	Hispanic Workers	Hispanic %	Total Workers	Hispanic Workers	Hispanic %	Total Workers	Hispanic Workers	Hispanic %																														
(1)	6260	Construction Laborers				2,285,323	26.8%	26.8%	2,404,650	809,521	33.7%	2,276,300	784,360	34.5%	128,350	25,161	19.6%	14.9%	338,127																												
(2)	6230	Carpenters				1,809,344	21.2%	48.0%	2,017,399	479,025	23.7%	1,848,664	433,284	23.4%	168,735	45,741	27.1%	-3.7%	-67,855																												
(3)	6420	Painters, Construction & Maintenance				764,618	9.0%	57.0%	857,509	288,608	33.7%	785,667	267,698	34.1%	71,842	20,910	29.1%	5.0%	39,025																												
(4)	6350	Electricians				690,383	8.1%	65.1%	968,180	134,501	13.9%	674,387	106,546	15.8%	293,793	27,955	9.5%	6.3%	42,377																												
(5)	6440	Pipelayers, Plumbers, Pipefitters & Steamfitters				580,426	6.8%	71.9%	739,593	141,376	19.1%	577,413	115,519	20.0%	162,180	25,857	15.9%	4.1%	23,460																												
(6)	6320	Construction Equipment Operators, except Paving				417,694	4.9%	76.8%	517,416	65,186	12.6%	421,496	54,908	13.0%	95,920	10,278	10.7%	2.3%	9,744																												
(7)	6510	Roofers				315,096	3.7%	80.5%	322,054	121,549	37.7%	327,163	119,683	36.6%	5,109	1,866	36.5%	0.1%	191																												
(8)	6220	Brickmasons, Blockmasons & Stonemasons				275,634	3.2%	83.7%	287,724	90,718	31.5%	282,320	87,943	31.2%	5,404	2,775	51.4%	-20.2%	-57,031																												
(9)	6330	Drywall Installers, Ceiling Tile Installers & Tapers				264,370	3.1%	86.8%	269,496	126,793	47.0%	275,945	125,452	45.5%	6,449	1,341	20.8%	24.7%	68,072																												
(10)	6240	Carpet, Floor & Tile Installers & Finishers				253,368	3.0%	89.8%	299,286	109,820	36.7%	252,234	92,206	36.6%	47,052	17,614	37.4%	-0.9%	-2,218																												
(11)	6600	Helpers, Construction Trades				130,210	1.5%	91.3%	141,276	50,638	35.8%	136,796	47,198	34.5%	4,480	3,440	76.8%	-42.3%	-57,842																												
(12)	6250	Cement Masons, Concrete Finishers & Terrazzo Workers				120,308	1.4%	92.7%	125,137	49,671	39.7%	124,799	47,806	38.3%	338	1,865	18.1%	20.2%	25,188																												
(13)	6730	Highway Maintenance Workers				111,078	1.3%	94.0%	123,524	13,812	11.2%	108,372	12,895	11.9%	15,152	917	6.1%	5.8%	6,336																												

(14)	6520	Sheet Metal Workers	87,318	1.0%	95.0%	171,306	22,052	12.9%	89,685	12,308	13.7%	81,621	9,744	11.9%	1.8%	1,601
(15)	6530	Structural Iron & Steel Workers	67,184	0.8%	95.8%	89,219	15,266	17.1%	68,144	11,197	16.4%	21,075	4,069	19.3%	-2.9%	-1,960
(16)	6460	Plasterers & Stucco Masons	60,155	0.7%	96.5%	61,283	32,889	53.7%	61,214	32,554	53.2%	69	335	485.5%	-432.3%	-264,644
(17)	6400	Insulation Workers	51,329	0.6%	97.1%	57,213	18,439	32.2%	51,960	16,518	31.8%	5,253	1,921	36.6%	-4.8%	-2,484
(18)	6660	Construction & Building Inspectors	40,259	0.5%	97.6%	127,734	11,588	9.1%	38,829	4,579	11.8%	88,905	7,009	7.9%	3.9%	1,518
(19)	6760	Miscellaneous Construction Workers, Including Septic	37,813	0.4%	98.0%	66,448	12,963	19.5%	38,692	8,151	21.1%	27,756	4,812	17.3%	3.7%	1,443
(20)	6710	Fence Erectors	38,308	0.4%	98.5%	44,778	13,428	30.0%	35,157	11,580	32.9%	9,621	1,848	19.2%	13.7%	4,827
(21)	6360	Glaziers	36,108	0.4%	98.9%	56,872	9,609	16.9%	31,797	6,447	20.3%	25,075	3,162	12.6%	7.7%	2,437
(22)	6300	Paving, Surfacing & Tamping Equipment Operators	27,137	0.3%	99.2%	27,786	5,500	19.8%	29,286	5,429	18.5%	-1,500	71	-4.7%	23.3%	6,815
(23)	6700	Elevator Installers & Repairers	26,031	0.3%	99.5%	32,710	3,218	9.8%	24,187	2,792	11.5%	8,523	426	5.0%	6.5%	1,583
(24)	6430	Paperhangers	11,418	0.1%	99.7%	13,023	1,268	9.7%	11,733	777	6.6%	1,290	491	38.1%	-31.4%	-3,689
(25)	6500	Reinforcing Iron & Rebar Workers	11,847	0.1%	99.8%	13,626	3,859	28.3%	10,687	3,436	32.2%	2,939	423	14.4%	17.8%	1,898
(26)	6210	Boilermakers	11,457	0.1%	99.9%	25,989	2,668	10.3%	10,438	777	7.4%	15,551	1,891	12.2%	-4.7%	-492
(27)	6720	Hazardous Materials Removal Workers	5,171	0.1%	100.0%	38,701	10,637	27.5%	5,289	2,063	39.0%	33,412	8,574	25.7%	13.3%	706
(28)	TOTAL		8,529,387	100.0%	100.0%	9,899,932	2,644,602	26.7%	8,598,654	2,414,106	28.1%	1,324,394	230,496	17.4%	--	--
(29)	TOTAL Weighted to Match % of Employees in Construction [Column (d)]								28.1%			26.5%			1.4%	117,134

Note: Hispanic equals Hispanic/Latino alone and combined with any other race group.

Occupations w/Shortfall:	9
Occupations with Shortfall / 27 Occupations:	33.3%

Appendix Table B.8
Average Annual Earnings in Selected On-Site Construction
Occupations, National Compensation Survey 2006

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(i)	(j)	(k)
	2002 Census Occupation Title	Average Annual Earnings, 2006	Shortfall (-) or Surplus (+) According to Appendix Tables B.1 - B.7						
			Women	African Americans	Asian Americans	Am. Ind./ Al. Nat. + Nat. Haw./ Oth. Pac. Is.	More than 2 Races or Other	Whites	Hispanics
(1)	670 Elevator installers & repairers	\$78,880	-643	-73	-147	-302	-161	-747	1,583
(2)	679 Structural iron and steel workers	\$57,713	-1,617	-3,264	112	1,676	218	3,141	-1,960
(3)	666 Construction & building inspectors	\$52,408	-1,677	-208	432	485	151	-2,272	1,518
(4)	678 Brickmasons, blockmasons, & stonemasons	\$50,298	-4,393	218	-1,495	-159	1,131	-24,973	-57,031
(5)	635 Electricians	\$47,453	-16,222	-17,783	-2,038	-624	780	-11,611	42,337
(6)	676 Pipelayers, plumbers, pipefitters, & steamfitters	\$46,809	-5,819	-25,184	-1,368	-3,940	2,050	10,284	23,460
(7)	621 Boilermakers	\$43,948	4	-69	0	28	-14	752	492
(8)	677 Carpenters	\$41,688	-47,911	-39,693	-2,860	-7,102	2,119	18,508	-67,856
(9)	633 Carpet, floor, and tile installers & finishers	\$39,975	-3,689	-4,688	230	-1,010	-803	9,059	-2,218
(10)	678 Sheet metal workers	\$39,832	-3,511	-929	-385	154	65	57	1,601
(11)	632 Misc. construction equipment operators	\$39,174	-7,916	-11,122	781	-6,560	3,084	5,357	9,744
(12)	678 Cement masons, concrete finishers, & terrazo workers	\$38,946	325	-5,001	211	1,827	1,671	52,346	25,188
(13)	672 Hazardous materials removal workers	\$38,409	-243	-312	51	-101	-34	-462	706
(14)	647 Glaziers	\$37,896	-503	-1,023	26	26	19	-141	2,437
(15)	643 Drywall installers, ceiling tile installers, & tapers	\$36,554	-7,540	-14,890	659	-529	-578	-40,582	68,072
(16)	646 Plasterers & stucco masons	\$34,150	-3,876	-14,908	104	725	759	20,656	-264,644
(17)	640 Insulation workers	\$34,039	-2,271	-4,033	140	41	-267	3,233	-2,484
(18)	676 Misc. construction & related workers	\$32,868	-568	714	25	-239	-559	-2,213	1,443
(19)	673 Highway maintenance workers	\$31,518	-1,706	870	-61	-328	-338	-5,735	6,336
(20)	648 Paperhangers	\$31,143	1,098	-1,565	213	-206	-299	3,868	-3,689
(21)	642 Painters, construction & maintenance	\$30,991	-27,753	-55,846	-456	-1,232	-1,417	-39,080	39,025
(22)	677 Roofers	\$30,627	-5,830	-21,739	860	-2,250	-2,383	-16,538	191
(23)	630 Paving, surfacing, & tamping equipment operators	\$29,873	-5,910	1,961	0	-2,513	-1,852	-2,664	6,815
(24)	675 Construction laborers	\$29,802	-55,995	-165,283	-2,855	-30,136	-16,392	-101,639	338,127
(25)	660 Helpers, construction trades	\$25,700	-5,740	-2,586	-594	-358	-443	-657	-57,842
(26)	Shortfall-Weighted Average Annual Earnings for Construction Occupations with Shortfall		\$36,718	\$34,391	\$40,200	\$39,160	\$31,198	\$34,447	\$36,371
(27)	Surplus-Weighted Average Annual Earnings for Occupations with Surplus		\$32,956	\$25,768	\$36,424	\$45,910	\$42,839	\$39,416	\$33,595
(28)	Row (27) / Row (28)		89.8%	74.9%	90.6%	117.2%	137.3%	114.4%	92.4%

Source: Column (c): US Bureau of Labor Statistics, *National Compensation Survey: Occupational Wages in the United States, June 2006*, Summary 07-03, June 2007, Table 2 (for full-time civilian workers), at <http://www.bls.gov/ncs/ocs/sp/ncbl0910.pdf>, downloaded June 10, 2010. Separate average earnings are not available for Fence Erectors, Reinforcing Iron & Rebar Workers, and Septic Tank Servicers.

Columns (d) - (k) are from Column (p) of Appendix Tables B.1-B.7.

Appendix Table B.9
Representation of Women by Occupational Earnings,
Selected Construction Occupations, ACS 2006-2008

	(a)	(b)	(c)	(d)	(e)	(f)
	Category	Average Annual Earnings, 2006	Occupation	Women Employed in the Construction Industry		
				Number	%	Average %*
(1)	Ten Best-Paid Construction Trades	\$78,880	Elevator Installers & repairers	398	1.5%	1.8%
(2)		\$57,713	Structural iron and steel workers	990	1.5%	
(3)		\$52,408	Construction & building inspectors	3,434	8.5%	
(4)		\$50,298	Brickmasons, blockmasons, & stonemasons	2,675	1.0%	
(5)		\$47,453	Electricians	12,333	1.8%	
(6)		\$46,809	Pipelayers, plumbers, pipefitters, & steamfitters	8,906	1.5%	
(7)		\$43,948	Boilermakers	170	1.5%	
(8)		\$41,688	Carpenters	30,435	1.7%	
(9)		\$39,975	Carpet, floor & tile installers & finishers	6,502	2.6%	
(10)		\$39,832	Sheet metal workers	2,307	2.6%	
(11)	Intermediate-Level Construction Trades	\$39,174	Misc. construction equipment operators	8,796	2.1%	2.4%
(12)		\$38,946	Cement masons, concrete finishers, & terrazo	1,197	1.0%	
(13)		\$38,409	Hazardous materials removal workers	630	12.2%	
(14)		\$37,896	Glaziers	480	1.3%	
(15)		\$36,554	Drywall installers, ceiling tile installers, & tapers	7,313	2.8%	
(16)		\$34,150	Plasterers & stucco masons	924	1.5%	
(17)		\$34,039	Insulation workers	1,951	3.8%	
(18)		\$32,868	Misc. construction & related workers	1,313	3.4%	
(19)		\$31,518	Highway maintenance workers	3,836	3.5%	
(20)		\$31,143	Paperhangers	3,211	28.1%	
(21)		\$30,991	Painters, construction & maintenance	61,450	8.0%	
(22)		\$30,627	Roofers	4,767	1.5%	
(23)		\$29,873	Paving, surfacing, & tamping equip. operators	697	2.6%	
(24)	Entry-Level Positions	\$29,802	Construction laborers	88,856	3.7%	3.8%
(25)		\$25,700	Helpers, construction trades	6,003	4.6%	
(26)	Ratio of Weighted Average for 10 Best Paid to Weighted Average for Entry-Level Positions					0.49
(27)	Ratio of Weighted Average for Intermediate Level to Weighted Average for Entry-Level Positions					0.65

Source for Columns (b) and (c): Appendix Table B.8.

Source for Columns (d) and (e): Appendix Table B.1

Column (f) = average of Column (e) weighted by Column (d).

* Shaded entries are more than twice the weighted average of the other occupations in their group. Weighted averages exclude shaded entries.

Appendix Table B.10
Representation of African Americans by Occupational Earnings,
Selected Construction Occupations, ACS 2006-2008

	(a)	(b)	(c)	(d)	(e)	(f)
	Category	Average Annual Earnings, 2006	Occupation	Af. Ams. Employed in the Construction Industry		
				Number	%	Average %*
(1)	Ten Best-Paid Construction Trades	\$78,880	Elevator Installers & repairers	1,537	6.0%	6.8%
(2)		\$57,713	Structural iron and steel workers	4,264	6.3%	
(3)		\$52,408	Construction & building inspectors	3,211	8.0%	
(4)		\$50,298	Brickmasons, blockmasons, & stonemasons	35,647	12.9%	
(5)		\$47,453	Electricians	12,333	1.8%	
(6)		\$46,809	Pipelayers, plumbers, pipefitters, & steamfitters	41,462	7.1%	
(7)		\$43,948	Boilermakers	843	7.4%	
(8)		\$41,688	Carpenters	96,485	5.3%	
(9)		\$39,975	Carpet, floor & tile installers & finishers	13,179	5.2%	
(10)		\$39,832	Sheet metal workers	5,949	6.8%	
(11)	Intermediate-Level Construction Trades	\$39,174	Misc. construction equipment operators	25,947	6.2%	8.5%
(12)		\$38,946	Cement masons, concrete finishers, & terrazo	17,371	14.4%	
(13)		\$38,409	Hazardous materials removal workers	623	12.0%	
(14)		\$37,896	Glaziers	1,481	4.1%	
(15)		\$36,554	Drywall installers, ceiling tile installers, & tapers	17,138	6.5%	
(16)		\$34,150	Plasterers & stucco masons	6,530	10.9%	
(17)		\$34,039	Insulation workers	4,219	8.2%	
(18)		\$32,868	Misc. construction & related workers	4,279	11.3%	
(19)		\$31,518	Highway maintenance workers	13,561	12.2%	
(20)		\$31,143	Paperhangers	249	2.2%	
(21)		\$30,991	Painters, construction & maintenance	53,796	7.0%	
(22)		\$30,627	Roofers	26,716	8.5%	
(23)		\$29,873	Paving, surfacing, & tamping equip. operators	2,881	10.6%	
(24)	Entry-Level Positions	\$29,802	Construction laborers	217,886	9.9%	10.0%
(25)		\$25,700	Helpers, construction trades	13,179	10.8%	
(26)	Ratio of Weighted Average for 10 Best Paid to Weighted Average for Entry-Level Positions					0.68
(27)	Ratio of Weighted Average for Intermediate Level to Weighted Average for Entry-Level Positions					0.86

Source for Columns (b) and (c): Appendix Table B.8.

Source for Columns (d) and (e): Appendix Table B.2

Column (f) = average of Column (e) weighted by Column (d).

* Shaded entries are more than twice the weighted average of the other occupations in their group. Weighted averages exclude shaded entries.

Appendix Table B.11
Representation of Asians by Occupational Earnings,
Selected Construction Occupations, ACS 2006-2008

	(a)	(b)	(c)	(d)	(e)	(f)
	Category	Average Annual Earnings, 2006	Occupation	Asians Employed in the Construction Industry		
				Number	%	Average %*
(1)	Ten Best-Paid Construction Trades	\$78,880	Elevator Installers & repairers	40	0.2%	0.3%
(2)		\$57,713	Structural iron and steel workers	432	0.6%	
(3)		\$52,408	Construction & building inspectors	589	1.5%	
(4)		\$50,298	Brickmasons, blockmasons, & stonemasons	944	0.3%	
(5)		\$47,453	Electricians	2,783	0.4%	
(6)		\$46,809	Pipelayers, plumbers, pipefitters, & steamfitters	1,166	0.2%	
(7)		\$43,948	Boilermakers	0	0.0%	
(8)		\$41,688	Carpenters	4,903	0.3%	
(9)		\$39,975	Carpet, floor & tile installers & finishers	666	0.3%	
(10)		\$39,832	Sheet metal workers	295	0.3%	
(11)	Intermediate-Level Construction Trades	\$39,174	Misc. construction equipment operators	25	0.1%	0.3%
(12)		\$38,946	Cement masons, concrete finishers, & terrazo	211	0.2%	
(13)		\$38,409	Hazardous materials removal workers	70	1.4%	
(14)		\$37,896	Glaziers	169	0.5%	
(15)		\$36,554	Drywall installers, ceiling tile installers, & tapers	659	0.2%	
(16)		\$34,150	Plasterers & stucco masons	104	0.2%	
(17)		\$34,039	Insulation workers	140	0.3%	
(18)		\$32,868	Misc. construction & related workers	25	0.1%	
(19)		\$31,518	Highway maintenance workers	126	0.1%	
(20)		\$31,143	Paperhangers	213	1.9%	
(21)		\$30,991	Painters, construction & maintenance	2,985	0.4%	
(22)		\$30,627	Roofers	860	0.3%	
(23)		\$29,873	Paving, surfacing, & tamping equip. operators	20	0.0%	
(24)	Entry-Level Positions	\$29,802	Construction laborers	8,521	0.4%	0.4%
(25)		\$25,700	Helpers, construction trades	489	0.4%	
(26)	Ratio of Weighted Average for 10 Best Paid to Weighted Average for Entry-Level Positions					0.84
(27)	Ratio of Weighted Average for Intermediate Level to Weighted Average for Entry-Level Positions					0.84

Source for Columns (b) and (c): Appendix Table B.8.

Source for Columns (d) and (e): Appendix Table B.3

Column (f) = average of Column (e) weighted by Column (d).

* Shaded entries are more than triple the weighted average of the other occupations in their group. Weighted averages exclude shaded entries.

Appendix Table B.12
**Representation of American Indians/Alaska Natives + Native Hawaiians/
Other Pacific Islanders by Occupational Earnings,
Selected Construction Occupations, ACS 2006-2008**

	(a)	(b)	(c)	(d)	(e)	(f)
	Category	Average Annual Earnings, 2006	Occupation	This Group Employed in the Construction Industry		
				Number	%	Average %*
(1)	Ten Best-Paid Construction Trades	\$78,880	Elevator Installers & repairers	88	0.3%	2.1%
(2)		\$57,713	Structural iron and steel workers	3,402	4.5%	
(3)		\$52,408	Construction & building inspectors	1,074	2.7%	
(4)		\$50,298	Brickmasons, blockmasons & stonemasons	7,273	2.6%	
(5)		\$47,453	Electricians	12,428	1.8%	
(6)		\$46,809	Pipelayers, plumbers, pipefitters, & steamfitters	10,767	1.9%	
(7)		\$43,948	Boilermakers	327	2.9%	
(8)		\$41,688	Carpenters	37,624	2.1%	
(9)		\$39,975	Carpet, floor & tile installers & finishers	4,375	1.7%	
(10)		\$39,832	Sheet metal workers	1,230	1.4%	
(11)	Intermediate-Level Construction Trades	\$39,174	Misc. construction equipment operators	11,195	2.7%	2.3%
(12)		\$38,946	Cement masons, concrete finishers, & terrazo	3,197	2.7%	
(13)		\$38,409	Hazardous materials removal workers	79	1.5%	
(14)		\$37,896	Glaziers	490	1.4%	
(15)		\$36,554	Drywall installers, ceiling tile installers, & tapers	6,485	2.5%	
(16)		\$34,150	Plasterers & stucco masons	725	1.2%	
(17)		\$34,039	Insulation workers	1,070	2.1%	
(18)		\$32,868	Misc. construction & related workers	621	1.6%	
(19)		\$31,518	Highway maintenance workers	2,376	2.1%	
(20)		\$31,143	Paperhangers	50	0.4%	
(21)		\$30,991	Painters, construction & maintenance	14,161	1.9%	
(22)		\$30,627	Roofers	7,034	2.2%	
(23)		\$29,873	Paving, surfacing, & tamping equip. operators	665	2.5%	
(24)	Entry-Level Positions	\$29,802	Construction laborers	54,821	2.4%	2.3%
(25)		\$25,700	Helpers, construction trades	130,210	2.3%	
(26)	Ratio of Weighted Average for 10 Best Paid to Weighted Average for Entry-Level Positions					0.89
(27)	Ratio of Weighted Average for Intermediate Level to Weighted Average for Entry-Level Positions					0.97

Source for Columns (b) and (c): Appendix Table B.8.

Source for Columns (d) and (e): Appendix Table B.4

Column (f) = average of Column (e) weighted by Column (d).

* Shaded entries are more than twice the weighted average of the other occupations in their group. Weighted averages exclude shaded entries.

Appendix Table B.13
Representation of Persons Reported as More than
Two Races or Other Races by Occupational Earnings,
Selected Construction Occupations, ACS 2006-2008

	(a)	(b)	(c)	(d)	(e)	(f)
	Category	Average Annual Earnings, 2006	Occupation	This Group Employed in the Construction Industry		
				Number	%	Average %*
(1)	Ten Best-Paid Construction Trades	\$78,880	Elevator Installers & repairers	240	0.9%	1.4%
(2)		\$57,713	Structural iron and steel workers	1,063	1.6%	
(3)		\$52,408	Construction & building inspectors	507	1.3%	
(4)		\$50,298	Brickmasons, blockmasons, & stonemasons	3,616	1.3%	
(5)		\$47,453	Electricians	9,931	1.4%	
(6)		\$46,809	Pipelayers, plumbers, pipefitters, & steamfitters	8,898	1.5%	
(7)		\$43,948	Boilermakers	148	1.3%	
(8)		\$41,688	Carpenters	25,860	1.4%	
(9)		\$39,975	Carpet, floor & tile installers & finishers	3,981	1.6%	
(10)		\$39,832	Sheet metal workers	1,039	1.2%	
(11)	Intermediate-Level Construction Trades	\$39,174	Misc. construction equipment operators	7,553	1.8%	1.6%
(12)		\$38,946	Cement masons, concrete finishers, & terrazo	1,671	1.4%	
(13)		\$38,409	Hazardous materials removal workers	25	0.5%	
(14)		\$37,896	Glaziers	570	1.6%	
(15)		\$36,554	Drywall installers, ceiling tile installers, & tapers	3,445	1.3%	
(16)		\$34,150	Plasterers & stucco masons	759	1.3%	
(17)		\$34,039	Insulation workers	876	1.7%	
(18)		\$32,868	Misc. construction & related workers	353	0.9%	
(19)		\$31,518	Highway maintenance workers	1,563	1.4%	
(20)		\$31,143	Paperhangers	35	0.3%	
(21)		\$30,991	Painters, construction & maintenance	12,379	1.6%	
(22)		\$30,627	Roofers	5,904	1.9%	
(23)		\$29,873	Paving, surfacing, & tamping equip. operators	448	1.7%	
(24)	Entry-Level Positions	\$29,802	Construction laborers	2,717	2.3%	2.0%
(25)		\$25,700	Helpers, construction trades	2,157	1.7%	
(26)	Ratio of Weighted Average for 10 Best Paid to Weighted Average for Entry-Level Positions					0.70
(27)	Ratio of Weighted Average for Intermediate Level to Weighted Average for Entry-Level Positions					0.80

Source for Columns (b) and (c): Appendix Table B.8.

Source for Columns (d) and (e): Appendix Table B.5

Column (f) = average of Column (e) weighted by Column (d).

* Shaded entries are more than twice the weighted average of the other occupations in their group. Weighted averages exclude shaded entries.

Appendix Table B.14
Representation of Whites by Occupational Earnings,
Selected Construction Occupations, ACS 2006-2008

	(a)	(b)	(c)	(d)	(e)	(f)
	Category	Average Annual Earnings, 2006	Occupation	Whites Employed in the Construction Industry		
				Number	%	Average %*
(1)	Ten Best-Paid Construction Trades	\$78,880	Elevator Installers & repairers	21,231	81.6%	68.3%
(2)		\$57,713	Structural iron and steel workers	48,116	71.6%	
(3)		\$52,408	Construction & building inspectors	30,104	74.8%	
(4)		\$50,298	Brickmasons, blockmasons, & stonemasons	144,625	52.5%	
(5)		\$47,453	Electricians	513,588	74.4%	
(6)		\$46,809	Pipelayers, plumbers, pipefitters, & steamfitters	407,608	70.2%	
(7)		\$43,948	Boilermakers	9,398	82.0%	
(8)		\$41,688	Carpenters	1,219,151	67.4%	
(9)		\$39,975	Carpet, floor & tile installers & finishers	139,661	55.1%	
(10)		\$39,832	Sheet metal workers	66,726	76.4%	
(11)	Intermediate-Level Construction Trades	\$39,174	Misc. construction equipment operators	324,045	77.6%	60.4%
(12)		\$38,946	Cement masons, concrete finishers, & terrazo	52,346	43.5%	
(13)		\$38,409	Hazardous materials removal workers	2,215	42.8%	
(14)		\$37,896	Glaziers	27,140	75.2%	
(15)		\$36,554	Drywall installers, ceiling tile installers, & tapers	114,399	43.3%	
(16)		\$34,150	Plasterers & stucco masons	20,656	34.3%	
(17)		\$34,039	Insulation workers	29,447	57.4%	
(18)		\$32,868	Misc. construction & related workers	24,127	63.8%	
(19)		\$31,518	Highway maintenance workers	81,594	73.5%	
(20)		\$31,143	Paperhangers	9,979	87.4%	
(21)		\$30,991	Painters, construction & maintenance	416,278	54.4%	
(22)		\$30,627	Roofers	160,347	50.9%	
(23)		\$29,873	Paving, surfacing, & tamping equip. operators	18,285	67.4%	
(24)	Entry-Level Positions	\$29,802	Construction laborers	1,201,715	52.6%	52.5%
(25)		\$25,700	Helpers, construction trades	65,307	50.2%	
(26)	Ratio of Weighted Average for 10 Best Paid to Weighted Average for Entry-Level Positions					1.30
(27)	Ratio of Weighted Average for Intermediate Level to Weighted Average for Entry-Level Positions					1.15

Source for Columns (b) and (c): Appendix Table B.8.

Source for Columns (d) and (e): Appendix Table B.6.

Column (f) = average of Column (e) weighted by Column (d).

* Shaded entries are more than twice the weighted average of the other occupations in their group. Weighted averages exclude shaded entries.

Appendix Table B.15
Representation of Hispanics by Occupational Earnings,
Selected Construction Occupations, ACS 2006-2008

	(a)	(b)	(c)	(d)	(e)	(f)
	Category	Average Annual Earnings, 2006	Occupation	Hispanics Employed in the Construction Industry		
				Number	%	Average %*
(1)	Ten Best-Paid Construction Trades	\$78,880	Elevator Installers & repairers	2,792	11.5%	23.9%
(2)		\$57,713	Structural iron and steel workers	11,197	16.4%	
(3)		\$52,408	Construction & building inspectors	4,579	11.8%	
(4)		\$50,298	Brickmasons, blockmasons, & stonemasons	87,943	31.2%	
(5)		\$47,453	Electricians	106,546	15.8%	
(6)		\$46,809	Pipelayers, plumbers, pipefitters, & steamfitters	115,519	20.0%	
(7)		\$43,948	Boilermakers	777	7.4%	
(8)		\$41,688	Carpenters	433,284	23.4%	
(9)		\$39,975	Carpet, floor & tile installers & finishers	92,206	36.6%	
(10)		\$39,832	Sheet metal workers	12,308	13.7%	
(11)	Intermediate-Level Construction Trades	\$39,174	Misc. construction equipment operators	54,908	13.0%	35.2%
(12)		\$38,946	Cement masons, concrete finishers, & terrazo	47,806	38.3%	
(13)		\$38,409	Hazardous materials removal workers	2,063	39.0%	
(14)		\$37,896	Glaziers	6,447	20.3%	
(15)		\$36,554	Drywall installers, ceiling tile installers, & tapers	125,452	45.5%	
(16)		\$34,150	Plasterers & stucco masons	32,554	53.2%	
(17)		\$34,039	Insulation workers	16,518	31.8%	
(18)		\$32,868	Misc. construction & related workers	8,151	21.1%	
(19)		\$31,518	Highway maintenance workers	12,895	11.9%	
(20)		\$31,143	Paperhangers	777	6.6%	
(21)		\$30,991	Painters, construction & maintenance	267,698	34.1%	
(22)		\$30,627	Roofers	119,683	36.6%	
(23)		\$29,873	Paving, surfacing, & tamping equip. operators	5,429	18.5%	
(24)	Entry-Level Positions	\$29,802	Construction laborers	784,360	34.5%	34.5%
(25)		\$25,700	Helpers, construction trades	47,198	34.5%	
(26)	Ratio of Weighted Average for 10 Best Paid to Weighted Average for Entry-Level Positions					0.69
(27)	Ratio of Weighted Average for Intermediate Level to Weighted Average for Entry-Level Positions					1.02

Source for Columns (b) and (c): Appendix Table B.8.

Source for Columns (d) and (e): Appendix Table B.7

Column (f) = average of Column (e) weighted by Column (d).

* Shaded entries are more than twice the weighted average of the other occupations in their group. Weighted averages exclude shaded entries.

APPENDIX C

Appendix Table C.1
Gender Shortfalls in Craft Workers, Operatives, and Laborers
at Construction Firms Filing EEO-1 Reports, 2008

(a)		(b)	(c)		(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
NAICS Code	Construction Sector	Craft Workers (Skilled)					Operatives (Semi-Skilled)					Laborers (Unskilled)						
		Number of Employees in this Sector	% Women in Comparison Sectors *	% Women in this Sector	Shortfall (- = shortfall, + = longfall)		Number of Employees in this Sector	% Women in Comparison Sectors *	% Women in this Sector	Shortfall (- = shortfall, + = longfall)		Number of Employees in this Sector	% Women in Comparison Sectors *	% Women in this Sector	Shortfall (- = shortfall, + = longfall)			
					%	Number				%	Number				%	Number		
(1)	23	All Construction	631,337	8.60%	1.80%	-6.8%	-42,931	165,524	25.63%	3.44%	-22.2%	-36,730	261,066	32.66%	4.29%	-28.4%	-74,064	
(2)	236	Construction of Buildings	145,663	8.60%	1.77%	-6.8%	-9,942	24,845	25.63%	5.35%	-20.3%	-5,038	57,889	32.66%	3.89%	-28.8%	-16,654	
(3)	237	Heavy and Civil Engineering	135,504	8.60%	2.30%	-6.3%	-8,541	70,123	25.63%	3.63%	-22.0%	-15,430	81,296	32.66%	6.20%	-26.5%	-21,509	
(4)	238	Specialty Trade Contractors	350,170	8.60%	1.61%	-7.0%	-24,469	70,556	25.63%	2.59%	-23.0%	-16,260	121,881	32.66%	3.21%	-29.4%	-35,891	
(5)	23621	Industrial Building Construction	26,990	8.60%	2.34%	-6.3%	-1,690	6,487	25.63%	11.41%	-14.2%	-922	7,590	32.66%	5.11%	-27.6%	-2,091	
(6)	23622	Commercial & Institutional Building Construction	100,351	8.60%	1.64%	-7.0%	-6,984	14,993	25.63%	2.94%	-22.7%	-3,402	41,656	32.66%	3.62%	-29.0%	-12,097	
(7)	23711	Water & Sewer Line Construction	11,071	8.60%	1.75%	-6.9%	-758	5,395	25.63%	1.58%	-24.1%	-1,297	10,042	32.66%	2.56%	-30.1%	-3,023	
(8)	23712	Oil and Gas Pipeline Construction	4,499	8.60%	1.00%	-7.6%	-342	1,428	25.63%	3.85%	-21.8%	-311	3,126	32.66%	5.47%	-27.2%	-850	
(9)	23713	Power & Communications Line Construction	17,115	8.60%	1.87%	-6.7%	-1,152	4,017	25.63%	2.27%	-23.4%	-938	5,323	32.66%	3.51%	-29.2%	-1,552	
(10)	23721	Land Subdivision	1,057	8.60%	1.42%	-7.2%	-76	1,166	25.63%	2.74%	-22.9%	-267	1,639	32.66%	11.41%	-21.3%	-348	
(11)	23731	Highway, Street & Bridge Construction	50,889	8.60%	2.49%	-6.1%	-3,109	41,933	25.63%	3.90%	-21.7%	-9,112	41,823	32.66%	6.42%	-26.2%	-10,974	
(12)	23799	Other Heavy & Civil Engineering Construction	50,873	8.60%	2.49%	-6.1%	-3,108	16,184	25.63%	3.99%	-21.6%	-3,502	19,343	32.66%	8.04%	-24.6%	-4,762	
(13)	23811	Poured Concrete Foundation & Structure Construction	12,797	8.60%	0.88%	-7.7%	-988	1,989	25.63%	0.60%	-25.0%	-498	10,937	32.66%	0.98%	-31.7%	-3,465	
(14)	23812	Structural Steel & Precast Concrete Contractors	3,897	8.60%	1.10%	-7.5%	-292	373	25.63%	7.77%	-17.9%	-67	810	32.66%	0.74%	-31.9%	-259	
(15)	23813	Framing Contractors	6,889	8.60%	1.16%	-7.4%	-513	867	25.63%	0.81%	-24.8%	-215	2,430	32.66%	1.44%	-31.2%	-759	
(16)	23814	Masonry Contractors	5,673	8.60%	1.22%	-7.4%	-419	536	25.63%	0.37%	-25.3%	-135	5,928	32.66%	1.16%	-31.5%	-1,867	
(17)	23815	Glass & Glazing Contractors	1,911	8.60%	0.99%	-7.6%	-145	352	25.63%	2.27%	-23.4%	-82	665	32.66%	2.41%	-30.3%	-201	

(18)	23816	Roofing Contractors	7,987	8.60%	0.46%	-8.1%	-650	1,747	25.63%	0.74%	-24.9%	-435	5,952	32.66%	0.67%	-32.0%	-1,904			
(19)	23817	Siding Contractors	227	8.60%	0.00%	-8.6%	-20	146	25.63%	0.00%	-25.6%	-37	108	32.66%	0.00%	-32.7%	-35			
(20)	23819	Other Foundation, Structure, & Bldg. Exterior Contractors	3,062	8.60%	0.49%	-8.1%	-248	1,283	25.63%	1.09%	-24.5%	-315	2,405	32.66%	2.45%	-30.2%	-727			
(21)	23821	Electrical & Other Wiring Installation Contractors	50,293	8.60%	1.95%	-6.7%	-3,344	5,204	25.63%	2.56%	-23.1%	-1,201	8,887	32.66%	2.28%	-30.4%	-2,700			
(22)	23822	Plumbing, Heating, & Air Conditioning Contractors	45,385	8.60%	1.03%	-7.6%	-3,436	6,006	25.63%	2.88%	-22.8%	-1,366	9,478	32.66%	1.96%	-30.7%	-2,910			
(23)	23829	Other Building Equipment Contractoirs	7,917	8.60%	1.53%	-7.1%	-560	3,168	25.63%	5.71%	-19.9%	-631	2,903	32.66%	2.27%	-30.4%	-882			
(24)	23831	Drywall & Insulation Contractors	30,462	8.60%	1.79%	-6.8%	-2,074	6,479	25.63%	1.61%	-24.0%	-1,556	8,264	32.66%	4.47%	-28.2%	-2,330			
(25)	23832	Painting & Wall Covering Contractors	5,178	8.60%	3.07%	-5.5%	-286	443	25.63%	3.39%	-22.2%	-99	1,271	32.66%	7.16%	-25.5%	-324			
(26)	23833	Flooring Contractors	925	8.60%	0.65%	-8.0%	-74	99	25.63%	2.02%	-23.6%	-23	768	32.66%	4.43%	-28.2%	-217			
(27)	23834	Tile & Terrazzo Contractors	744	8.60%	3.63%	-5.0%	-37	16	25.63%	0.00%	-25.6%	-4	313	32.66%	1.92%	-30.7%	-96			
(28)	23835	Finish Carpentry Contractors	943	8.60%	1.48%	-7.1%	-67	198	25.63%	0.00%	-25.6%	-51	161	32.66%	2.48%	-30.2%	-49			
(29)	23839	Other Building Finishing Contractors	2,710	8.60%	0.70%	-7.9%	-214	289	25.63%	3.11%	-22.5%	-65	1,213	32.66%	4.12%	-28.5%	-346			
(30)	23891	Site Preparation Contractors	6,310	8.60%	1.43%	-7.2%	-452	5,083	25.63%	2.14%	-23.5%	-1,194	6,287	32.66%	3.32%	-29.3%	-1,845			
(31)	23899	All Other Specialty Trade Contractors	156,860	8.60%	1.81%	-6.8%	-10,651	36,278	25.63%	2.79%	-22.8%	-8,286	53,101	32.66%	4.45%	-28.2%	-14,980			
			Number of the 27 Sub Sectors with Shortfall:					27	Number of the 27 Sub Sectors with Shortfall:					27	Number of the 27 Sub Sectors with Shortfall:					27
			% of the 27 Sub Sectors with Shortfall:					100.0%	% of the 27 Sub Sectors with Shortfall:					100.0%	% of the 27 Sub Sectors with Shortfall:					100.0%

Source: EEOC, *Job Patterns for Minorities and Women in Private Industry (EEO-1), 2008*, at <http://www.eeoc.gov/statistics/employment/jobpat-eeo1/2008>, downloaded June 10, 2010.

* Comparison sectors = agriculture, mining, utilities, manufacturing, transportation, and warehousing.

Appendix Table C.2
African American Shortfalls in Craft Workers, Operatives, and Laborers
at Construction Firms Filing EEO-1 Reports, 2008

(a)		(b)	(c)		(d)	(e)		(f)	(g)	(h)	(i)		(j)	(k)	(l)	(m)	(n)		(o)	(p)	(q)
NAICS Code	Construction Sector	Craft Workers (Skilled)					Operatives (Semi-Skilled)					Laborers (Unskilled)									
		Number of Employees in this Sector	% Af. Am. in Comparison Sectors *	% Af. Am. in this Sector	Shortfall (- = shortfall, + = longfall)		Number of Employees in this Sector	% Af. Am. in Comparison Sectors *	% Af. Am. in this Sector	Shortfall (- = shortfall, + = longfall)		Number of Employees in this Sector	% Af. Am. in Comparison Sectors *	% Af. Am. in this Sector	Shortfall (- = shortfall, + = longfall)						
					%	Number				%	Number				%	Number					
(1)	23	All Construction	631,337	9.31%	6.00%	-3.3%	-20,897	165,524	13.70%	9.60%	-4.1%	-6,786	261,066	17.80%	9.17%	-8.6%	-22,530				
(2)	236	Construction of Buildings	145,663	9.31%	5.13%	-4.2%	-6,087	24,845	13.70%	11.50%	-2.2%	-547	57,889	17.80%	10.29%	-7.5%	-4,350				
(3)	237	Heavy & Civil Engineering	135,504	9.31%	7.84%	-1.5%	-1,998	70,123	13.70%	9.91%	-3.8%	-2,661	81,296	17.80%	10.71%	-7.1%	-5,762				
(4)	238	Specialty Trade Contractors	350,170	9.31%	5.65%	-3.7%	-12,807	70,556	13.70%	8.63%	-5.1%	-3,579	121,881	17.80%	7.62%	-10.2%	-12,409				
(5)	23621	Industrial Building Construction	26,990	9.31%	6.00%	-3.3%	-893	6,487	13.70%	17.08%	3.4%	219	7,590	17.80%	13.33%	-4.5%	-339				
(6)	23622	Commercial & Institutional Building Construction	100,351	9.31%	5.02%	-4.3%	-4,305	14,993	13.70%	9.26%	-4.4%	-666	41,656	17.80%	10.40%	-7.4%	-3,083				
(7)	23711	Water & Sewer Line Construction	11,071	9.31%	5.31%	-4.0%	-443	5,395	13.70%	6.69%	-7.0%	-378	10,042	17.80%	5.98%	-11.8%	-1,187				
(8)	23712	Oil and Gas Pipeline Construction	4,499	9.31%	10.89%	1.6%	71	1,428	13.70%	11.55%	-2.2%	-31	3,126	17.80%	8.13%	-9.7%	-302				
(9)	23713	Power & Communications Line Construction	17,115	9.31%	4.52%	-4.8%	-820	4,017	13.70%	6.37%	-7.3%	-294	5,323	17.80%	7.51%	-10.3%	-548				
(10)	23721	Land Subdivision	1,057	9.31%	15.80%	6.5%	69	1,166	13.70%	13.64%	-0.1%	-1	1,639	17.80%	8.24%	-9.6%	-157				
(11)	23731	Highway, Street & Bridge Construction	50,889	9.31%	9.21%	-0.1%	-51	41,933	13.70%	10.66%	-3.0%	-1,275	41,823	17.80%	11.18%	-6.6%	-2,769				
(12)	23799	Other Heavy & Civil Engineering Construction	50,873	9.31%	7.69%	-1.6%	-824	16,184	13.70%	9.48%	-4.2%	-683	19,343	17.80%	13.67%	-4.1%	-799				
(13)	23811	Poured Concrete Foundation & Structure Construction	12,797	9.31%	4.14%	-5.2%	-662	1,989	13.70%	4.98%	-8.7%	-173	10,937	17.80%	4.35%	-13.5%	-1,471				
(14)	23812	Structural Steel & Precast Concrete Contractors	3,897	9.31%	6.57%	-2.7%	-107	373	13.70%	4.02%	-9.7%	-36	810	17.80%	7.65%	-10.2%	-82				
(15)	23813	Framing Contractors	6,889	9.31%	1.76%	-7.6%	-520	867	13.70%	0.92%	-12.8%	-111	2,430	17.80%	1.65%	-16.2%	-392				
(16)	23814	Masonry Contractors	5,673	9.31%	5.54%	-3.8%	-214	536	13.70%	6.34%	-7.4%	-39	5,928	17.80%	6.24%	-11.6%	-685				
(17)	23815	Glass & Glazing Contractors	1,911	9.31%	9.73%	0.4%	8	352	13.70%	11.65%	-2.1%	-7	665	17.80%	9.02%	-8.8%	-58				

(18)	23816	Roofing Contractors	7,987	9.31%	5.98%	-3.3%	-266	1,747	13.70%	6.41%	-7.3%	-127	5,952	17.80%	6.52%	-11.3%	-671
(19)	23817	Siding Contractors	227	9.31%	3.96%	-5.4%	-12	146	13.70%	8.90%	-4.8%	-7	108	17.80%	14.81%	-3.0%	-3
(20)	23819	Other Foundation, Structure, & Bldg. Exterior Contractors	3,062	9.31%	3.63%	-5.7%	-174	1,283	13.70%	3.74%	-10.0%	-128	2,405	17.80%	3.91%	-13.9%	-334
(21)	23821	Electrical & Other Wiring Installation Contractors	50,293	9.31%	6.80%	-2.5%	-1,262	5,204	13.70%	10.59%	-3.1%	-162	8,887	17.80%	8.37%	-9.4%	-838
(22)	23822	Plumbing, Heating, & Air Conditioning Contractors	45,385	9.31%	5.15%	-4.2%	-1,888	6,006	13.70%	8.31%	-5.4%	-324	9,478	17.80%	11.22%	-6.6%	-624
(23)	23829	Other Building Equipment Contractois	7,917	9.31%	5.46%	-3.9%	-305	3,168	13.70%	13.86%	0.2%	5	2,903	17.80%	11.47%	-6.3%	-184
(24)	23831	Drywall & Insulation Contractors	30,462	9.31%	2.97%	-6.3%	-1,931	6,479	13.70%	5.28%	-8.4%	-546	8,264	17.80%	4.34%	-13.5%	-1,112
(25)	23832	Painting & Wall Covering Contractors	5,178	9.31%	6.23%	-3.1%	-159	443	13.70%	9.93%	-3.8%	-17	1,271	17.80%	5.82%	-12.0%	-152
(26)	23833	Flooring Contractors	925	9.31%	4.43%	-4.9%	-45	99	13.70%	11.11%	-2.6%	-3	768	17.80%	4.04%	-13.8%	-106
(27)	23834	Tile & Terrazzo Contractors	744	9.31%	1.08%	-8.2%	-61	16	13.70%	6.25%	-7.5%	-1	313	17.80%	0.64%	-17.2%	-54
(28)	23835	Finish Carpentry Contractors	943	9.31%	2.12%	-7.2%	-68	198	13.70%	3.03%	-10.7%	-21	161	17.80%	11.80%	-6.0%	-10
(29)	23839	Other Building Finishing Contractors	2,710	9.31%	8.41%	-0.9%	-24	289	13.70%	8.65%	-5.1%	-15	1,213	17.80%	16.41%	-1.4%	-17
(30)	23891	Site Preparation Contractors	6,310	9.31%	8.56%	-0.8%	-47	5,083	13.70%	7.97%	-5.7%	-291	6,287	17.80%	8.49%	-9.3%	-585
(31)	23899	All Other Specialty Trade Contractors	156,860	9.31%	6.08%	-3.2%	-5,067	36,278	13.70%	9.36%	-4.3%	-1,574	53,101	17.80%	8.33%	-9.5%	-5,029
			Number of the 27 Sub Sectors with Shortfall:		24		Number of the 27 Sub Sectors with Shortfall:		25		Number of the 27 Sub Sectors with Shortfall:		27				
			% of the 27 Sub Sectors with Shortfall:		88.9%		% of the 27 Sub Sectors with Shortfall:		92.6%		% of the 27 Sub Sectors with Shortfall:		100.0%				

Source: EEOC, *Job Patterns for Minorities and Women in Private Industry (EEO-1), 2008*, at <http://www.eeoc.gov/statistics/employment/jobpat-eeo1/2008>, downloaded June 10, 2010.

* Comparison sectors = agriculture, mining, utilities, manufacturing, transportation, and warehousing.

Appendix Table C.3
Shortfalls of Non-African American Racial Minorities ** in Craft Workers, Operatives,
and Laborers at Construction Firms Filing EEO-1 Reports, 2008

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
NAICS Code	Construction Sector	Craft Workers (Skilled)					Operatives (Semi-Skilled)					Laborers (Unskilled)					
		Number of Employees in this Sector	% Minority in Comparison Sectors *	% Minority in this Sector	Shortfall (- = shortfall, + = longfall)		Number of Employees in this Sector	% Minority in Comparison Sectors *	% Minority in this Sector	Shortfall (- = shortfall, + = longfall)		Number of Employees in this Sector	% Minority in Comparison Sectors *	% Minority in this Sector	Shortfall (- = shortfall, + = longfall)		
					%	Number				%	Number				%	Number	
(1)	23	All Construction	631,337	4.24%	2.78%	-1.5%	-9,218	165,524	5.56%	2.89%	-2.7%	-4,426	261,066	5.52%	2.31%	-3.2%	-8,390
(2)	236	Construction of Buildings	145,663	4.24%	3.03%	-1.2%	-1,760	165,524	5.56%	2.92%	-2.6%	-4,372	261,066	5.52%	2.62%	-2.9%	-7,567
(3)	237	Heavy and Civil Engineering	135,504	4.24%	2.38%	-1.9%	-2,522	165,524	5.56%	2.90%	-2.7%	-4,409	261,066	5.52%	3.05%	-2.5%	-6,437
(4)	238	Specialty Trade Contractors	350,170	4.24%	2.38%	-1.9%	-6,512	165,524	5.56%	2.55%	-3.0%	-4,978	261,066	5.52%	2.11%	-3.4%	-8,910
(5)	23621	Industrial Building Construction	26,990	4.24%	3.31%	-0.9%	-251	6,487	5.56%	2.70%	-2.9%	-186	7,590	5.52%	3.00%	-2.5%	-191
(6)	23622	Commercial & Institutional Building Construction	100,351	4.24%	2.68%	-1.6%	-1,565	14,993	5.56%	2.14%	-3.4%	-513	41,656	5.52%	2.13%	-3.4%	-1,412
(7)	23711	Water & Sewer Line Construction	11,071	4.24%	3.15%	-1.1%	-121	5,395	5.56%	2.99%	-2.6%	-139	10,042	5.52%	3.98%	-1.5%	-155
(8)	23712	Oil and Gas Pipeline Construction	4,499	4.24%	2.60%	-1.6%	-74	1,428	5.56%	2.45%	-3.1%	-44	3,126	5.52%	1.41%	-4.1%	-128
(9)	23713	Power & Communications Line Construction	17,115	4.24%	3.09%	-1.2%	-197	4,017	5.56%	3.16%	-2.4%	-96	5,323	5.52%	1.85%	-3.7%	-195
(10)	23721	Land Subdivision	1,057	4.24%	4.16%	-0.1%	-1	1,166	5.56%	1.47%	-4.1%	-48	1,639	5.52%	2.32%	-3.2%	-52
(11)	23731	Highway, Street & Bridge Construction	50,889	4.24%	2.42%	-1.8%	-926	41,933	5.56%	2.52%	-3.0%	-1,275	41,823	5.52%	2.39%	-3.1%	-1,309
(12)	23799	Other Heavy & Civil Engineering Construction	50,873	4.24%	3.31%	-0.9%	-473	16,184	5.56%	3.92%	-1.6%	-265	19,343	5.52%	2.55%	-3.0%	-574
(13)	23811	Poured Concrete Foundation & Structure Construction	12,797	4.24%	1.64%	-2.6%	-333	1,989	5.56%	0.70%	-4.9%	-97	10,937	5.52%	0.74%	-4.8%	-523
(14)	23812	Structural Steel & Precast Concrete Contractors	3,897	4.24%	4.32%	0.1%	3	373	5.56%	5.10%	-0.5%	-2	810	5.52%	0.37%	-5.2%	-42
(15)	23813	Framing Contractors	6,889	4.24%	0.87%	-3.4%	-232	867	5.56%	1.05%	-4.5%	-39	2,430	5.52%	0.83%	-4.7%	-114
(16)	23814	Masonry Contractors	5,673	4.24%	9.40%	5.2%	293	536	5.56%	1.87%	-3.7%	-20	5,928	5.52%	2.42%	-3.1%	-184
(17)	23815	Glass & Glazing Contractors	1,911	4.24%	2.08%	-2.2%	-41	352	5.56%	3.40%	-2.2%	-8	665	5.52%	2.10%	-3.4%	-23

(18)	23816	Roofing Contractors	7,987	4.24%	2.43%	-1.8%	-145	1,747	5.56%	2.92%	-2.6%	-46	5,952	5.52%	2.07%	-3.5%	-205
(19)	23817	Siding Contractors	227	4.24%	0.88%	-3.4%	-8	146	5.56%	0.68%	-4.9%	-7	108	5.52%	1.86%	-3.7%	-4
(20)	23819	Other Foundation, Structure, & Bldg. Exterior Contractors	3,062	4.24%	2.53%	-1.7%	-52	1,283	5.56%	18.62%	13.1%	168	2,405	5.52%	2.03%	-3.5%	-84
(21)	23821	Electrical & Other Wiring Installation Contractors	50,293	4.24%	2.63%	-1.6%	-810	5,204	5.56%	2.17%	-3.4%	-176	8,887	5.52%	1.71%	-3.8%	-339
(22)	23822	Plumbing, Heating, & Air Conditioning Contractors	45,385	4.24%	2.68%	-1.6%	-708	6,006	5.56%	2.10%	-3.5%	-208	9,478	5.52%	1.97%	-3.6%	-336
(23)	23829	Other Building Equipment Contractoires	7,917	4.24%	1.60%	-2.6%	-209	3,168	5.56%	1.30%	-4.3%	-135	2,903	5.52%	1.93%	-3.6%	-104
(24)	23831	Drywall & Insulation Contractors	30,462	4.24%	1.97%	-2.3%	-691	6,479	5.56%	1.18%	-4.4%	-284	8,264	5.52%	0.99%	-4.5%	-374
(25)	23832	Painting & Wall Covering Contractors	5,178	4.24%	2.51%	-1.7%	-90	443	5.56%	7.23%	1.7%	7	1,271	5.52%	1.02%	-4.5%	-57
(26)	23833	Flooring Contractors	925	4.24%	1.30%	-2.9%	-27	99	5.56%	4.04%	-1.5%	-2	768	5.52%	1.69%	-3.8%	-29
(27)	23834	Tile & Terrazzo Contractors	744	4.24%	1.61%	-2.6%	-20	16	5.56%	0.00%	-5.6%	-1	313	5.52%	2.56%	-3.0%	-9
(28)	23835	Finish Carpentry Contractors	943	4.24%	9.87%	5.6%	53	198	5.56%	2.03%	-3.5%	-7	161	5.52%	0.62%	-4.9%	-8
(29)	23839	Other Building Finishing Contractors	2,710	4.24%	1.21%	-3.0%	-82	289	5.56%	2.10%	-3.5%	-10	1,213	5.52%	2.55%	-3.0%	-36
(30)	23891	Site Preparation Contractors	6,310	4.24%	1.49%	-2.8%	-174	5,083	5.56%	0.99%	-4.6%	-232	6,287	5.52%	0.89%	-4.6%	-291
(31)	23899	All Other Specialty Trade Contractors	156,860	4.24%	2.93%	-1.3%	-2,055	36,278	5.56%	3.69%	-1.9%	-678	53,101	5.52%	2.89%	-2.6%	-1,397
			Number of the 27 Sub Sectors with Shortfall:		24		Number of the 27 Sub Sectors with Shortfall:		25		Number of the 27 Sub Sectors with Shortfall:		27				
			% of the 27 Sub Sectors with Shortfall:		88.9%		% of the 27 Sub Sectors with Shortfall:		92.6%		% of the 27 Sub Sectors with Shortfall:		100.0%				

Source: EEOC, Job Patterns for Minorities and Women in Private Industry (EEO-1), 2008, at <http://www.eeoc.gov/statistics/employment/jobpat-eeo1/2008>, downloaded June 10, 2010.

* Comparison sectors = agriculture, mining, utilities, manufacturing, transportation, and warehousing.

** Non-African American Racial minorities = Asians, American Indians, Hawaiians, and Two or More Races.

Appendix Table C.4
White Shortfalls in Craft Workers, Operatives, and Laborers
at Construction Firms Filing EEO-1 Reports, 2008

(a)		(b)	(c)				(d)	(e)	(f)		(g)	(h)	(i)		(j)	(k)	(l)	(m)	(n)	(o)		(p)	(q)
NAICS Code Construction Sector			Craft Workers (Skilled)					Operatives (Semi-Skilled)					Laborers (Unskilled)										
			Number of Employees in this Sector	% White. in Comparison Sectors *	% White in this Sector	Shortfall (- = shortfall, + = longfall)		Number of Employees in this Sector	% White. in Comparison Sectors *	% White in this Sector	Shortfall (- = shortfall, + = longfall)		Number of Employees in this Sector	% White. in Comparison Sectors *	% White in this Sector	Shortfall (- = shortfall, + = longfall)							
						%	Number				%	Number				%	Number						
(1)	23	All Construction	631,337	74.81%	64.06%	-10.8%	-67,869	165,524	64.32%	59.93%	-4.4%	-7,267	261,066	43.62%	42.83%	-0.8%	-2,062						
(2)	236	Construction of Buildings	145,663	74.81%	64.20%	-10.6%	-15,455	165,524	64.32%	57.15%	-7.2%	-11,868	261,066	43.62%	44.47%	0.9%	2,219						
(3)	237	Heavy and Civil Engineering	135,504	74.81%	63.61%	-11.2%	-15,176	165,524	64.32%	66.13%	1.8%	2,996	261,066	43.62%	47.84%	4.2%	11,017						
(4)	238	Specialty Trade Contractors	350,170	74.81%	64.17%	-10.6%	-37,258	165,524	64.32%	54.76%	-9.6%	-15,824	261,066	43.62%	38.70%	-4.9%	-12,844						
(5)	23621	Industrial Building Construction	26,990	74.81%	70.46%	-4.4%	-1,174	6,487	64.32%	57.44%	-6.9%	-446	7,590	43.62%	48.66%	5.0%	383						
(6)	23622	Commercial & Institutional Building Construction	100,351	74.81%	65.10%	-9.7%	-9,744	14,993	64.32%	58.77%	-5.6%	-832	41,656	43.62%	46.88%	3.3%	1,358						
(7)	23711	Water & Sewer Line Construction	11,071	74.81%	62.38%	-12.4%	-1,376	5,395	64.32%	53.75%	-10.6%	-570	10,042	43.62%	35.41%	-8.2%	-824						
(8)	23712	Oil and Gas Pipeline Construction	4,499	74.81%	65.21%	-9.6%	-432	1,428	64.32%	71.43%	7.1%	102	3,126	43.62%	46.07%	2.5%	77						
(9)	23713	Power & Communications Line Construction	17,115	74.81%	80.23%	5.4%	928	4,017	64.32%	79.34%	15.0%	603	5,323	43.62%	55.03%	11.4%	607						
(10)	23721	Land Subdivision	1,057	74.81%	55.44%	-19.4%	-205	1,166	64.32%	47.86%	-16.5%	-192	1,639	43.62%	30.87%	-12.8%	-209						
(11)	23731	Highway, Street & Bridge Construction	50,889	74.81%	61.24%	-13.6%	-6,906	41,933	64.32%	69.59%	5.3%	2,210	41,823	43.62%	51.30%	7.7%	3,212						
(12)	23799	Other Heavy & Civil Engineering Construction	50,873	74.81%	60.69%	-14.1%	-7,183	16,184	64.32%	58.64%	-5.7%	-919	19,343	43.62%	46.58%	3.0%	573						
(13)	23811	Poured Concrete Foundation & Structure Construction	12,797	74.81%	30.49%	-44.3%	-5,672	1,989	64.32%	21.72%	-42.6%	-847	10,937	43.62%	18.46%	-25.2%	-2,752						
(14)	23812	Structural Steel & Precast Concrete Contractors	3,897	74.81%	68.36%	-6.5%	-251	373	64.32%	36.73%	-27.6%	-103	810	43.62%	34.20%	-9.4%	-76						
(15)	23813	Framing Contractors	6,889	74.81%	35.64%	-39.2%	-2,698	867	64.32%	21.34%	-43.0%	-373	2,430	43.62%	20.00%	-23.6%	-574						
(16)	23814	Masonry Contractors	5,673	74.81%	43.17%	-31.6%	-1,795	536	64.32%	47.76%	-16.6%	-89	5,928	43.62%	22.67%	-21.0%	-1,242						
(17)	23815	Glass & Glazing Contractors	1,911	74.81%	65.41%	-9.4%	-180	352	64.32%	48.30%	-16.0%	-56	665	43.62%	39.40%	-4.2%	-28						

(18)	23816	Roofing Contractors	7,987	74.81%	38.54%	-36.3%	-2,897	1,747	64.32%	43.16%	-21.2%	-370	5,952	43.62%	22.85%	-20.8%	-1,236
(19)	23817	Siding Contractors	227	74.81%	83.70%	8.9%	20	146	64.32%	73.97%	9.7%	14	108	43.62%	74.07%	30.5%	33
(20)	23819	Other Foundation, Structure, & Bldg. Exterior Contractors	3,062	74.81%	39.35%	-35.5%	-1,086	1,283	64.32%	47.86%	-16.5%	-211	2,405	43.62%	22.87%	-20.8%	-499
(21)	23821	Electrical & Other Wiring Installation Contractors	50,293	74.81%	75.83%	1.0%	513	5,204	64.32%	70.14%	5.8%	303	8,887	43.62%	55.56%	11.9%	1,061
(22)	23822	Plumbing, Heating, & Air Conditioning Contractors	45,385	74.81%	78.58%	3.8%	1,711	6,006	64.32%	71.98%	7.7%	460	9,478	43.62%	54.58%	11.0%	1,039
(23)	23829	Other Building Equipment Contractois	7,917	74.81%	84.30%	9.5%	751	3,168	64.32%	72.29%	8.0%	252	2,903	43.62%	69.72%	26.1%	758
(24)	23831	Drywall & Insulation Contractors	30,462	74.81%	38.72%	-36.1%	-10,994	6,479	64.32%	33.68%	-30.6%	-1,985	8,264	43.62%	21.13%	-22.5%	-1,859
(25)	23832	Painting & Wall Covering Contractors	5,178	74.81%	43.38%	-31.4%	-1,627	443	64.32%	23.70%	-40.6%	-180	1,271	43.62%	24.08%	-19.5%	-248
(26)	23833	Flooring Contractors	925	74.81%	67.78%	-7.0%	-65	99	64.32%	52.53%	-11.8%	-12	768	43.62%	45.57%	2.0%	15
(27)	23834	Tile & Terrazzo Contractors	744	74.81%	36.18%	-38.6%	-287	16	64.32%	43.75%	-20.6%	-3	313	43.62%	12.78%	-30.8%	-97
(28)	23835	Finish Carpentry Contractors	943	74.81%	56.20%	-18.6%	-175	198	64.32%	22.73%	-41.6%	-82	161	43.62%	39.13%	-4.5%	-7
(29)	23839	Other Building Finishing Contractors	2,710	74.81%	63.32%	-11.5%	-311	289	64.32%	78.20%	13.9%	40	1,213	43.62%	27.12%	-16.5%	-200
(30)	23891	Site Preparation Contractors	6,310	74.81%	72.28%	-2.5%	-160	5,083	64.32%	60.55%	-3.8%	-192	6,287	43.62%	39.32%	-4.3%	-270
(31)	23899	All Other Specialty Trade Contractors	156,860	74.81%	67.16%	-7.7%	-12,000	36,278	64.32%	55.18%	-9.1%	-3,316	53,101	43.62%	43.97%	0.4%	186
			Number of the 27 Sub Sectors with Shortfall:		22		Number of the 27 Sub Sectors with Shortfall:		19		Number of the 27 Sub Sectors with Shortfall:		15				
			% of the 27 Sub Sectors with Shortfall:		81.5%		% of the 27 Sub Sectors with Shortfall:		70.4%		% of the 27 Sub Sectors with Shortfall:		55.6%				

Source: EEOC, Job Patterns for Minorities and Women in Private Industry (EEO-1), 2008, at <http://www.eeoc.gov/statistics/employment/jobpat-eeo1/2008>, downloaded June 10, 2010.

* Comparison sectors = agriculture, mining, utilities, manufacturing, transportation, and warehousing.

Appendix Table C.5
Hispanic Shortfalls in Craft Workers, Operatives, and Laborers
at Construction Firms Filing EEO-1 Reports, 2008

(a)		(b)	(c)		(d)		(e)	(f)		(g)	(h)	(i)		(j)	(k)	(l)	(m)	(n)		(o)	(p)	(q)
NAICS Code	Construction Sector	Craft Workers (Skilled)						Operatives (Semi-Skilled)						Laborers (Unskilled)								
		Number of Employees in this Sector	% Hisp. in Comparison Sectors *	% Hisp. in this Sector	Shortfall (- = shortfall, + = longfall)		Number of Employees in this Sector	% Hisp. in Comparison Sectors *	% Hisp. in this Sector	Shortfall (- = shortfall, + = longfall)		Number of Employees in this Sector	% Hisp. in Comparison Sectors *	% Hisp. in this Sector	Shortfall (- = shortfall, + = longfall)							
					%	Number				%	Number				%	Number						
(1)	23	All Construction	631,337	11.63%	27.16%	15.5%	98,047	165,524	16.41%	27.58%	11.2%	18,489	261,066	33.07%	45.46%	12.4%	32,346					
(2)	236	Construction of Buildings	145,663	11.63%	27.63%	16.0%	23,310	165,524	16.41%	28.97%	12.6%	20,793	261,066	33.07%	42.28%	9.2%	24,038					
(3)	237	Heavy and Civil Engineering	135,504	11.63%	25.64%	14.0%	18,978	165,524	16.41%	21.07%	4.7%	7,714	261,066	33.07%	38.89%	5.8%	15,194					
(4)	238	Specialty Trade Contractors	350,170	11.63%	27.56%	15.9%	55,767	165,524	16.41%	33.56%	17.2%	28,393	261,066	33.07%	51.58%	18.5%	48,312					
(5)	23621	Industrial Building Construction	26,990	11.63%	20.23%	8.6%	2,321	6,487	16.41%	22.78%	6.4%	413	7,590	33.07%	35.02%	2.0%	148					
(6)	23622	Commercial & Institutional Building Construction	100,351	11.63%	27.19%	15.6%	15,615	14,993	16.41%	29.83%	13.4%	2,012	41,656	33.07%	40.79%	7.7%	3,216					
(7)	23711	Water & Sewer Line Construction	11,071	11.63%	29.16%	17.5%	1,941	5,395	16.41%	36.57%	20.2%	1,088	10,042	33.07%	54.63%	21.6%	2,165					
(8)	23712	Oil and Gas Pipeline Construction	4,499	11.63%	21.29%	9.7%	435	1,428	16.41%	14.57%	-1.8%	-26	3,126	33.07%	44.40%	11.3%	354					
(9)	23713	Power & Communications Line Construction	17,115	11.63%	12.16%	0.5%	91	4,017	16.41%	11.13%	-5.3%	-212	5,323	33.07%	35.62%	2.6%	136					
(10)	23721	Land Subdivision	1,057	11.63%	24.60%	13.0%	137	1,166	16.41%	37.05%	20.6%	241	1,639	33.07%	58.57%	25.5%	418					
(11)	23731	Highway, Street & Bridge Construction	50,889	11.63%	27.13%	15.5%	7,888	41,933	16.41%	17.23%	0.8%	344	41,823	33.07%	35.12%	2.1%	857					
(12)	23799	Other Heavy & Civil Engineering Construction	50,873	11.63%	28.32%	16.7%	8,491	16,184	16.41%	27.76%	11.4%	1,837	19,343	33.07%	37.20%	4.1%	799					
(13)	23811	Poured Concrete Foundation & Structure Construction	12,797	11.63%	63.73%	52.1%	6,667	1,989	16.41%	72.60%	56.2%	1,118	10,937	33.07%	76.45%	43.4%	4,744					
(14)	23812	Structural Steel & Precast Concrete Contractors	3,897	11.63%	20.76%	9.1%	356	373	16.41%	54.16%	37.8%	141	810	33.07%	57.78%	24.7%	200					
(15)	23813	Framing Contractors	6,889	11.63%	62.10%	50.5%	3,477	867	16.41%	76.70%	60.3%	523	2,430	33.07%	77.53%	44.5%	1,080					
(16)	23814	Masonry Contractors	5,673	11.63%	47.26%	35.6%	2,021	536	16.41%	44.03%	27.6%	148	5,928	33.07%	68.67%	35.6%	2,110					
(17)	23815	Glass & Glazing Contractors	1,911	11.63%	22.76%	11.1%	213	352	16.41%	36.65%	20.2%	71	665	33.07%	49.47%	16.4%	109					

(18)	23816	Roofing Contractors	7,987	11.63%	53.05%	41.4%	3,308	1,747	16.41%	47.51%	31.1%	543	5,952	33.07%	68.57%	35.5%	2,113
(19)	23817	Siding Contractors	227	11.63%	11.45%	-0.2%	0	146	16.41%	15.75%	-0.7%	-1	108	33.07%	9.26%	-23.8%	-26
(20)	23819	Other Foundation, Structure, & Bldg. Exterior Contractors	3,062	11.63%	54.51%	42.9%	1,313	1,283	16.41%	29.77%	13.4%	171	2,405	33.07%	71.19%	38.1%	917
(21)	23821	Electrical & Other Wiring Installation Contractors	50,293	11.63%	14.84%	3.2%	1,614	5,204	16.41%	17.10%	0.7%	36	8,887	33.07%	34.35%	1.3%	114
(22)	23822	Plumbing, Heating, & Air Conditioning Contractors	45,385	11.63%	13.60%	2.0%	894	6,006	16.41%	17.62%	1.2%	73	9,478	33.07%	32.24%	-0.8%	-79
(23)	23829	Other Building Equipment Contractois	7,917	11.63%	8.64%	-3.0%	-237	3,168	16.41%	12.56%	-3.9%	-122	2,903	33.07%	16.88%	-16.2%	-470
(24)	23831	Drywall & Insulation Contractors	30,462	11.63%	56.35%	44.7%	13,623	6,479	16.41%	59.87%	43.5%	2,816	8,264	33.07%	73.54%	40.5%	3,344
(25)	23832	Painting & Wall Covering Contractors	5,178	11.63%	47.89%	36.3%	1,878	443	16.41%	59.14%	42.7%	189	1,271	33.07%	69.08%	36.0%	458
(26)	23833	Flooring Contractors	925	11.63%	26.49%	14.9%	137	99	16.41%	32.32%	15.9%	16	768	33.07%	48.70%	15.6%	120
(27)	23834	Tile & Terrazzo Contractors	744	11.63%	61.16%	49.5%	369	16	16.41%	50.00%	33.6%	5	313	33.07%	84.03%	51.0%	160
(28)	23835	Finish Carpentry Contractors	943	11.63%	31.81%	20.2%	190	198	16.41%	72.22%	55.8%	111	161	33.07%	48.45%	15.4%	25
(29)	23839	Other Building Finishing Contractors	2,710	11.63%	27.05%	15.4%	418	289	16.41%	9.34%	-7.1%	-20	1,213	33.07%	53.92%	20.9%	253
(30)	23891	Site Preparation Contractors	6,310	11.63%	17.67%	6.0%	381	5,083	16.41%	30.49%	14.1%	716	6,287	33.07%	51.30%	18.2%	1,146
(31)	23899	All Other Specialty Trade Contractors	156,860	11.63%	23.84%	12.2%	19,153	36,278	16.41%	31.76%	15.4%	5,569	53,101	33.07%	44.81%	11.7%	6,234
			Number of the 27 Sub Sectors with Shortfall:		2		Number of the 27 Sub Sectors with Shortfall:		5		Number of the 27 Sub Sectors with Shortfall:		3				
			% of the 27 Sub Sectors with Shortfall:		7.4%		% of the 27 Sub Sectors with Shortfall:		18.5%		% of the 27 Sub Sectors with Shortfall:		11.1%				

Source: EEOC, Job Patterns for Minorities and Women in Private Industry (EEO-1), 2008, at <http://www.eeoc.gov/statistics/employment/jobpat-eeo1/2008>, downloaded June 10, 2010.

* Comparison sectors = agriculture, mining, utilities, manufacturing, transportation, and warehousing.

Appendix Table C.6
Employment of Women Craft, Operative, and Laborer Employees
in the Construction Industry Compared to Other "Blue Collar"
Industries,* EEO-1 Reports, 1975 - 2008

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Job Type	Industry	Variable	1975	1980	1985	1990	1995	2000	2008
(1)	Craft	Other Blue Collar	% of Employees	6.7%	9.1%	8.8%	9.3%	9.6%	10.7%	11.6%
(2)		Construction of	% of Employees	0.4%	1.8%	1.7%	2.7%	1.7%	1.6%	1.8%
(3)		Buildings	Difference	-6.3%	-7.3%	-7.2%	-6.6%	-7.9%	-9.1%	-9.9%
(4)		Heavy	% of Employees	0.3%	1.0%	1.2%	1.9%	2.4%	2.5%	2.3%
(5)		Construction	Difference	-6.3%	-8.1%	-7.6%	-7.5%	-7.3%	-8.2%	-9.3%
(6)		Specialty Trade	% of Employees	0.7%	0.6%	1.1%	1.7%	2.1%	1.7%	1.6%
(7)		Contractors	Difference	-5.9%	-8.5%	-7.7%	-7.6%	-7.5%	-9.1%	-10.0%
(8)		All Construction	% of Employees	0.5%	1.0%	1.3%	2.1%	2.1%	1.9%	1.8%
(9)			Difference	-6.1%	-8.1%	-7.5%	-7.3%	-7.5%	-8.8%	-9.8%
(10)	Operatives	Other Blue Collar	% of Employees	30.6%	33.4%	35.2%	33.8%	32.1%	29.4%	31.0%
(11)		Construction of	% of Employees	2.1%	5.0%	7.5%	7.9%	5.4%	4.8%	5.4%
(12)		Buildings	Difference	-28.5%	-28.4%	-27.7%	-25.8%	-26.6%	-24.5%	-25.7%
(13)		Heavy	% of Employees	0.8%	2.8%	3.9%	4.0%	3.9%	4.5%	3.6%
(14)		Construction	Difference	-29.8%	-30.7%	-31.3%	-29.8%	-28.2%	-24.9%	-27.4%
(15)		Specialty Trade	% of Employees	5.1%	13.2%	14.6%	9.0%	7.0%	4.5%	2.6%
(16)		Contractors	Difference	-25.5%	-20.2%	-20.6%	-24.8%	-25.1%	-24.9%	-28.4%
(17)		All Construction	% of Employees	2.2%	6.7%	8.5%	6.9%	5.5%	4.4%	3.4%
(18)			Difference	-28.4%	-26.7%	-26.6%	-26.9%	-26.6%	-24.9%	-27.6%
(19)	Laborers	Other Blue Collar	% of Employees	31.6%	34.8%	35.6%	31.5%	35.3%	35.0%	35.6%
(20)		Construction of	% of Employees	0.4%	1.8%	1.7%	2.7%	1.7%	1.6%	3.9%
(21)		Buildings	Difference	-31.2%	-33.0%	-34.0%	-28.8%	-33.6%	-33.3%	-31.8%
(22)		Heavy	% of Employees	0.3%	1.0%	1.2%	1.9%	2.4%	2.5%	6.2%
(23)		Construction	Difference	-31.2%	-33.9%	-34.4%	-29.7%	-32.9%	-32.4%	-29.4%
(24)		Specialty Trade	% of Employees	0.7%	0.6%	1.1%	1.7%	2.1%	1.7%	3.2%
(25)		Contractors	Difference	-30.8%	-34.3%	-34.5%	-29.8%	-33.2%	-33.3%	-32.4%
(26)		All Construction	% of Employees	1.7%	4.1%	6.6%	7.6%	6.7%	5.9%	4.3%
(27)			Difference	-29.9%	-30.7%	-29.0%	-23.9%	-28.6%	-29.1%	-31.4%

* For 1975-2000, Other "Blue Collar" industries = Farming, Fishing, & Forestry; Mining, Oil & Gas Extraction, & Quarrying; Manufacturing; and Transportation & Warehousing (all SICs 001- 400, excluding Construction). Figure for 2008 created by extrapolation from 1975-2000.

Appendix Table C.7
Employment of African American Craft, Operative, and Laborer Employees
in the Construction Industry Compared to Other "Blue Collar"
Industries,* EEO-1 Reports, 1975 - 2008

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Job Type	Industry	Variable	1975	1980	1985	1990	1995	2000	2008
(1)	Craft	Other Blue Collar	% of Employees	6.8%	8.4%	8.8%	9.1%	9.4%	9.8%	10.9%
(2)		Construction of	% of Employees	7.6%	7.3%	8.8%	8.5%	6.5%	6.3%	5.1%
(3)		Buildings	Difference	0.7%	-1.0%	-0.1%	-0.7%	-2.8%	-3.5%	-5.7%
(4)		Heavy	% of Employees	12.0%	11.8%	11.9%	10.3%	9.1%	8.9%	7.8%
(5)		Construction	Difference	5.2%	3.4%	3.1%	1.1%	-0.3%	-0.9%	-3.0%
(6)		Specialty Trade	% of Employees	4.7%	4.9%	5.3%	6.0%	6.1%	6.4%	5.7%
(7)		Contractors	Difference	-2.2%	-3.4%	-3.6%	-3.2%	-3.3%	-3.4%	-5.2%
(8)		All Construction	% of Employees	7.7%	7.3%	7.9%	7.9%	7.0%	7.1%	6.0%
(9)			Difference	0.8%	-1.1%	-0.9%	-1.2%	-2.4%	-2.8%	-4.9%
(10)	Operatives	Other Blue Collar	% of Employees	15.2%	16.1%	16.9%	17.2%	17.2%	16.7%	17.9%
(11)		Construction of	% of Employees	13.6%	18.0%	12.4%	12.0%	11.5%	9.1%	9.9%
(12)		Buildings	Difference	-1.6%	1.9%	-4.5%	-5.3%	-5.7%	-7.6%	-7.9%
(13)		Heavy	% of Employees	17.0%	16.9%	16.6%	17.8%	14.3%	12.1%	9.9%
(14)		Construction	Difference	1.8%	0.7%	-0.3%	0.6%	-2.9%	-4.6%	-7.9%
(15)		Specialty Trade	% of Employees	12.4%	12.0%	11.8%	12.8%	12.3%	10.7%	8.6%
(16)		Contractors	Difference	-2.7%	-4.1%	-5.0%	-4.5%	-4.9%	-6.0%	-9.2%
(17)		All Construction	% of Employees	15.0%	15.7%	13.9%	14.5%	13.0%	11.1%	9.6%
(18)			Difference	-0.1%	-0.5%	-3.0%	-2.7%	-4.2%	-5.6%	-8.3%
(19)	Laborers	Other Blue Collar	% of Employees	19.4%	18.7%	18.7%	19.0%	19.2%	19.2%	19.1%
(20)		Construction of	% of Employees	33.3%	26.9%	25.4%	23.5%	17.3%	12.9%	10.3%
(21)		Buildings	Difference	13.9%	8.2%	6.7%	4.4%	-1.9%	-6.3%	-8.9%
(22)		Heavy	% of Employees	27.9%	27.0%	24.0%	24.4%	18.0%	14.3%	10.7%
(23)		Construction	Difference	8.5%	8.3%	5.4%	5.4%	-1.2%	-4.9%	-8.4%
(24)		Specialty Trade	% of Employees	28.0%	25.6%	20.9%	16.1%	18.0%	15.5%	7.6%
(25)		Contractors	Difference	8.5%	6.8%	2.3%	-3.0%	-1.2%	-3.8%	-11.5%
(26)		All Construction	% of Employees	29.7%	26.7%	23.8%	21.9%	17.9%	14.4%	9.2%
(27)			Difference	10.2%	8.0%	5.1%	2.9%	-1.3%	-4.8%	-10.0%

* For 1975-2000, Other "Blue Collar" industries = Farming, Fishing, & Forestry; Mining, Oil & Gas Extraction, & Quarrying; Manufacturing; and Transportation & Warehousing (all SICs 001- 400, excluding Construction). Figure for 2008 created by extrapolation from 1975-2000.

Appendix Table C.8
Employment of Asian + American Indian Craft, Operative, and Laborer Employees
in the Construction Industry Compared to Other "Blue Collar"
Industries,* EEO-1 Reports, 1975 - 2008

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Job Type	Industry	Variable	1975	1980	1985	1990	1995	2000	2008
(1)	Craft	Other Blue Collar	% of Employees	0.7%	1.7%	1.5%	1.9%	2.2%	3.2%	3.6%
(2)		Construction of	% of Employees	1.1%	1.1%	2.2%	1.7%	1.9%	1.6%	3.0%
(3)		Buildings	Difference	0.4%	-0.6%	0.6%	-0.3%	-0.3%	-1.6%	-0.6%
(4)		Heavy	% of Employees	1.4%	1.7%	2.1%	1.5%	2.5%	2.2%	2.9%
(5)		Construction	Difference	0.7%	0.0%	0.6%	-0.4%	0.3%	-1.0%	-0.7%
(6)		Specialty Trade	% of Employees	1.2%	1.2%	1.2%	1.4%	1.7%	2.0%	2.6%
(7)		Contractors	Difference	0.5%	-0.5%	-0.3%	-0.5%	-0.5%	-1.2%	-1.0%
(8)		All Construction	% of Employees	1.2%	1.3%	1.7%	1.5%	2.1%	2.0%	2.8%
(9)	Operatives		Difference	0.5%	-0.4%	0.2%	-0.4%	-0.1%	-1.2%	-0.8%
(10)		Other Blue Collar	% of Employees	0.8%	1.6%	2.3%	2.9%	3.7%	5.0%	6.0%
(11)		Construction of	% of Employees	1.7%	0.9%	3.2%	1.8%	2.2%	1.6%	2.4%
(12)		Buildings	Difference	0.9%	-0.7%	0.9%	-1.1%	-1.5%	-3.4%	-3.6%
(13)		Heavy	% of Employees	1.4%	1.7%	1.3%	1.6%	2.0%	2.4%	2.9%
(14)		Construction	Difference	0.6%	0.1%	-1.0%	-1.3%	-1.7%	-2.6%	-3.1%
(15)		Specialty Trade	% of Employees	0.9%	2.4%	2.7%	1.8%	2.2%	2.4%	3.1%
(16)		Contractors	Difference	0.1%	0.8%	0.4%	-1.1%	-1.5%	-2.6%	-3.0%
(17)	Laborers	All Construction	% of Employees	1.3%	1.7%	2.2%	1.7%	2.1%	2.3%	2.9%
(18)			Difference	0.5%	0.1%	0.0%	-1.2%	-1.6%	-2.7%	-3.1%
(19)		Other Blue Collar	% of Employees	1.0%	1.7%	2.3%	3.1%	4.0%	4.6%	5.8%
(20)		Construction of	% of Employees	1.2%	0.8%	1.3%	1.9%	1.9%	1.8%	3.0%
(21)		Buildings	Difference	0.3%	-0.9%	-1.0%	-1.2%	-2.1%	-2.7%	-2.8%
(22)		Heavy	% of Employees	1.2%	1.3%	1.3%	1.6%	2.2%	1.6%	2.6%
(23)		Construction	Difference	0.2%	-0.4%	-1.1%	-1.5%	-1.9%	-3.0%	-3.2%
(24)		Specialty Trade	% of Employees	0.7%	1.1%	2.2%	2.0%	2.1%	1.5%	2.1%
(25)		Contractors	Difference	-0.3%	-0.6%	-0.2%	-1.1%	-1.9%	-3.0%	-3.7%
(26)		All Construction	% of Employees	1.1%	1.1%	1.5%	1.8%	2.1%	1.6%	2.4%
(27)			Difference	0.1%	-0.6%	-0.9%	-1.3%	-1.9%	-2.9%	-3.3%

* For 1975-2000, Other "Blue Collar" industries = Farming, Fishing, & Forestry; Mining, Oil & Gas Extraction, & Quarrying; Manufacturing; and Transportation & Warehousing (all SICs 001- 400, excluding Construction). Figure for 2008 created by extrapolation from 1975-2000.

In 2008, data are for Asians + American Indians/Alaska Natives + Native Hawaiian/Other Pacific Islanders =+ 2 or More Races.

Appendix Table C.9
Employment of White Craft, Operative, and Laborer Employees
in the Construction Industry Compared to Other "Blue Collar"
Industries,* EEO-1 Reports, 1975 - 2008

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Job Type	Firm Type	Variable	1975	1980	1985	1990	1995	2000	2008
Craft	Other Blue Collar	% of Employees	88.8%	85.5%	84.4%	83.1%	82.2%	77.9%	76.0%
	Construction of Buildings	% of Employees	87.7%	85.1%	82.5%	83.0%	82.0%	76.0%	64.2%
		Difference	-1.1%	-0.4%	-1.9%	-0.1%	-0.2%	-1.9%	-11.8%
	Heavy Construction	% of Employees	81.5%	78.9%	82.5%	78.4%	55.5%	72.4%	63.6%
		Difference	-7.3%	-6.6%	-1.9%	-4.7%	-26.6%	-5.5%	-12.4%
	Specialty Trade Contractors	% of Employees	90.8%	90.3%	77.7%	87.7%	84.8%	77.9%	64.2%
Operatives		Difference	2.0%	4.9%	-6.7%	4.6%	2.6%	-0.1%	-11.8%
	All Construction	% of Employees	87.1%	86.1%	89.6%	83.7%	82.1%	76.0%	64.1%
		Difference	-1.7%	0.7%	5.2%	0.5%	-0.1%	-2.0%	-11.9%
	Other Blue Collar	% of Employees	78.6%	75.4%	73.7%	71.5%	69.7%	64.9%	62.0%
	Construction of Buildings	% of Employees	78.7%	71.7%	74.4%	77.7%	73.4%	64.2%	57.2%
		Difference	0.1%	-3.6%	0.7%	6.2%	3.7%	-0.7%	-4.9%
Laborers	Heavy Construction	% of Employees	74.7%	71.2%	70.5%	69.4%	72.7%	67.9%	66.1%
		Difference	-3.9%	-4.2%	-3.3%	-2.2%	3.0%	3.0%	4.1%
	Specialty Trade Contractors	% of Employees	80.3%	77.0%	75.3%	78.1%	72.2%	63.3%	54.8%
		Difference	1.8%	1.7%	1.6%	6.6%	2.5%	-1.6%	-7.3%
	All Construction	% of Employees	77.1%	73.2%	73.1%	74.9%	72.6%	65.3%	59.9%
		Difference	-1.5%	-2.2%	-0.6%	3.4%	2.9%	0.4%	-2.1%
Laborers	Other Blue Collar	% of Employees	69.7%	67.3%	67.0%	63.0%	58.0%	50.0%	47.2%
	Construction of Buildings	% of Employees	54.9%	58.7%	57.9%	58.1%	58.0%	49.8%	44.5%
		Difference	-14.8%	-8.6%	-9.1%	-4.9%	0.1%	-0.2%	-2.7%
	Heavy Construction	% of Employees	58.5%	53.9%	56.5%	56.9%	58.2%	50.5%	47.8%
		Difference	-11.2%	-13.4%	-10.5%	-6.1%	0.2%	0.5%	0.7%
	Specialty Trade Contractors	% of Employees	62.5%	60.6%	62.8%	69.0%	58.0%	48.2%	38.7%
Laborers		Difference	-7.2%	-6.8%	-4.2%	6.0%	0.1%	-1.8%	-8.5%
	All Construction	% of Employees	58.0%	56.9%	58.5%	60.5%	58.1%	49.6%	42.8%
		Difference	-11.7%	-10.5%	-8.6%	-2.5%	0.1%	-0.4%	-4.3%

* For 1975-2000, Other "Blue Collar" industries = Farming, Fishing, & Forestry; Mining, Oil & Gas Extraction, & Quarrying; Manufacturing; and Transportation & Warehousing (all SICs 001- 400, excluding Construction). Figure for 2008 created by extrapolation from 1975-2000.

Source: 1975-1980: EEO-1 reports provided to the authors by the EEOC. 2008: EEOC, Job Patterns for Minorities and Women in Private Industry (EEO-1), 2008, downloaded 6/10/2010 from <http://www.eeoc.gov/statistics/employment/jobpat-eeo1/2008>.

Appendix Table C.10
Employment of Hispanic Craft, Operative, and Laborer Employees
in the Construction Industry Compared to Other "Blue Collar"
Industries,* EEO-1 Reports, 1975 - 2008

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Job Type	Firm Type	Variable	1975	1980	1985	1990	1995	2000	2008
Craft	Other Blue Collar	% of Employees	3.7%	5.0%	5.3%	5.8%	6.2%	9.1%	9.5%
	Construction of Buildings	% of Employees	3.7%	6.5%	6.6%	6.9%	9.5%	16.1%	27.6%
		Difference	0.0%	1.5%	1.3%	1.1%	3.3%	7.0%	18.1%
	Heavy Construction	% of Employees	5.2%	7.6%	8.2%	9.8%	10.9%	16.5%	25.6%
		Difference	1.4%	2.6%	3.0%	4.0%	4.6%	7.4%	16.2%
	Specialty Trade Contractors	% of Employees	3.4%	3.5%	3.9%	4.9%	7.4%	14.0%	27.6%
Operatives		Difference	-0.3%	-1.5%	-1.3%	-0.9%	1.2%	4.9%	18.1%
	All Construction	% of Employees	4.0%	5.3%	5.8%	6.9%	8.9%	15.0%	27.2%
		Difference	0.3%	0.3%	0.5%	1.1%	2.6%	6.0%	17.7%
	Other Blue Collar	% of Employees	5.5%	7.0%	7.1%	8.3%	9.4%	13.4%	14.1%
	Construction of Buildings	% of Employees	6.0%	9.3%	10.1%	8.5%	12.9%	25.0%	29.0%
		Difference	0.6%	2.4%	3.0%	0.2%	3.5%	11.6%	14.9%
Laborers	Heavy Construction	% of Employees	7.0%	10.2%	11.7%	10.8%	10.9%	17.6%	21.1%
		Difference	1.5%	3.3%	4.6%	2.5%	1.6%	4.2%	7.0%
	Specialty Trade Contractors	% of Employees	6.4%	8.6%	10.2%	7.4%	13.3%	23.6%	33.6%
		Difference	0.9%	1.7%	3.0%	-1.0%	3.9%	10.2%	19.5%
	All Construction	% of Employees	6.6%	9.5%	10.8%	8.9%	12.3%	21.2%	27.6%
		Difference	1.1%	2.5%	3.6%	0.6%	2.9%	7.8%	13.5%
Laborers	Other Blue Collar	% of Employees	9.9%	12.3%	12.0%	14.9%	18.8%	26.3%	27.9%
	Construction of Buildings	% of Employees	10.5%	13.6%	15.4%	16.5%	22.7%	35.5%	42.3%
		Difference	0.6%	1.3%	3.5%	1.6%	3.9%	9.2%	14.4%
	Heavy Construction	% of Employees	12.5%	17.8%	18.2%	17.1%	21.6%	33.7%	38.9%
		Difference	2.5%	5.5%	6.3%	2.2%	2.8%	7.4%	11.0%
	Specialty Trade Contractors	% of Employees	8.9%	12.8%	14.1%	12.9%	21.8%	34.8%	51.6%
Laborers		Difference	-1.1%	0.6%	2.1%	-2.0%	3.0%	8.5%	23.7%
	All Construction	% of Employees	11.2%	15.3%	16.3%	15.8%	21.9%	34.4%	45.6%
		Difference	1.3%	3.1%	4.3%	0.9%	3.1%	8.2%	17.7%

* For 1975-2000, Other "Blue Collar" industries = Farming, Fishing, & Forestry; Mining, Oil & Gas Extraction, & Quarrying; Manufacturing; and Transportation & Warehousing (all SICs 001- 400, excluding Construction). Figure for 2008 created by extrapolation from 1975-2000.

Appendix Table C.11
Representation of Women and Race/Ethnic Minorities by Occupational
Skill Level, Construction Industry EEO-1 Reports, 2008

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	Skill Level	Women	African Americans	Asians	Amer. Ind. + Hawaiians	Two or More Races	White	Hispanic
(1)	% of Skilled Craft Workers	1.80%	6.00%	0.97%	1.33%	0.48%	64.16%	27.16%
(2)	% of Semi-Skilled Operatives	3.44%	9.60%	0.73%	2.03%	0.50%	59.93%	27.58%
(3)	% of Unskilled Laborers	4.29%	9.17%	0.70%	1.25%	0.49%	42.83%	45.56%
(4)	Row (1) / Row (3)	0.52	0.63	1.33	0.66	0.96	1.07	0.98
(5)	Row (2) / Row (3)	0.80	1.05	1.04	1.63	1.02	1.40	0.61

Source for Rows (1) - (3): EEOC, Job Patterns for Minorities and Women in Private Industry (EEO-1), 2008, downloaded 6/10/2010 from <http://www.eeoc.gov/statistics/employment/jobpat-eeo1/2008>.

APPENDIX D

APPENDIX D ENFORCEMENT ACTIONS

Recent litigation provides one indication of the continued presence of gender/race/ethnicity employment discrimination in the construction industry. Because of the expense, time, and disruptive effects on complainants' work lives and interpersonal relationships, only a very small fraction of all incidents of discrimination are likely to result in formal complaints or legal action of any kind, let alone suits in federal or state courts. Thus, litigation represents only the "tip of the iceberg" of discrimination activity. Nevertheless, where legal proceedings are filed and an administrative proceeding or court finds merit in their claims, these proceedings provide one form of documentation of employment discrimination within an industry.

Under Title VII of the Civil Rights Act of 1964, a first step in pursuing litigation is filing an administrative complaint with the federal Equal Employment Opportunity Commission (EEOC) or a state and local counterpart Fair Employment Practice Agency (FEPA). Appendix Table E.1 tabulates the number of charges lodged with the EEOC itself over the most recent five years, from 2005 thorough the beginning of 2010. The table includes only charges filed with the agency for which the EEOC issued a "found cause" determination that the charges appeared to have sufficient merit to justify proceeding further.

According to Table E.1, between 2005 and the present, the EEOC issued a "found cause" determination in 360 complaints in the construction industry of the type associated with the gender, race, or ethnicity discrimination which is the focus of this report. These included:

- 167 cases based on race or color discrimination;
- 137 cases alleging sex discrimination; and
- 56 cases alleging national origin discrimination.

This flow of cause determinations represents an average rate of 65 cases per year, or more than one a week.

While Table E.1 refers to complaints at the beginning of the litigation process, Appendix Table E.2 examines such allegations at later stages. The table summarizes 50 instances of litigation in which gender, race, or ethnic employment discrimination was alleged in construction and either a court ruled in favor of the plaintiffs' allegations or a case settlement of more than a nominal amount suggests that the allegations had at least some substance. The cases reported in the table were ruled on during the most recent five years, from the beginning of 2005 through the first part of 2010.

Table E.2 reports only a sample of cases from this period, drawn from those for which documentation could readily be found. However, even that limited set documents a continuing flow of such litigation. In fact, during the two most recent complete years examined -- 2008 and 2009 -- each year provided 10 or more cases, and the partial year 2010 provides seven more.

Moreover, Table E.2 reports that the discrimination issues presented in these cases are not confined to any subset of construction employment but arose broadly across the industry. Specifically, among the 50 cases summarized in the table:

- Nationwide Locations: Cases arose in each of the four major geographical regions into which the Census Bureau divides the nation -- 17 in the Northeast, 15 in the Midwest, 12 in the South, and 5 in the West.
- Multiple Demographic Groups: The cases alleged discrimination against women (14 cases); African Americans (29 cases), Hispanics (6 cases); Asians (2 cases), and multiple or unknown demographic groups (3 cases).
- A range of construction trades: About half the cases involved construction craft occupations, including carpenters, dry wall installers, electricians, painters, plumbers, sheet metal workers, stone masons, and welders. The other half involved other construction occupations, including equipment operators, flaggers, helpers, laborers, and truck drivers.
- Different discriminating Entity: 44 cases alleged discrimination by construction employers; 6 alleged discrimination by construction unions.
- Multiple Employment Practices: The two most numerous complaints in the cases were for harassment (25 cases) and retaliation (21 cases). Other common complaints concerned recruitment and hiring (10 cases), work assignments or referrals (9 cases), and terminations (6 cases).

Appendix Table D.1
EEOC "Found Cause" Determinations in Employment Discrimination Charges
Against Entities in the Construction Industry, Fiscal Years 2005-2010,
for Charge Bases Related to Gender, Race, and Ethnicity

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
	Basis for Charge	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010 (through 5/14/10)	TOTAL	Average Annual Rate
(1)	Sex	42	26	16	21	21	11	137	25
(2)	Race or Color	48	26	21	30	29	13	167	30
(3)	National Origin	20	10	4	8	11	3	56	10
(4)	TOTAL	110	62	41	59	61	27	360	65

Sources: Columns (a)-(g): EEOC special tabulation from internal records, June 2010.
Columns (h) -(i): Computed by the authors.

Appendix Table D.2
50 Instances of Litigation Concerning Race, Ethnic, or Gender Employment Discrimination in the
Construction Industry with Supportive Court Findings or Substantial Settlements, 2005 - 2010

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)
Case	Court Findings	Year	Location				Demographic Group					Employment Practice							Discriminator		Occupations	
			North-east	Mid-west	South	West	Women	African Amer./ Black	Hispanic / Latino	Asians	Mixed or Unknown	Recruit ment or Hiring	Referrals, Assignments, Promotions	Pay, Benefits, Terms	Training, Appren-tice-ships	Haras- sment	Term- inations	Reta- lia- tion	Emp- loyer	Union	Skilled	Less Skilled or Unknown
(1) <i>EEOC v. Area Erectors, Inc.</i> , 97-cv-02339 (N.D. Ill. May 28, 2009) (consent decree)	Illinois construction company settled race discrimination and retaliation lawsuit for \$650,000 where group of African-American employees were laid off after working for short periods of time, while white employees were retained for long-term employment, and class representative was terminated after filing complaint	2009		x				x										x	x	x		iron worker, operating engineer
(2) <i>EEOC v. The Crom Corporation et al.</i> , 09-cv-00128-SPM-AK (N.D. Fl. March 18, 2010)	Florida construction company settled racial harassment and retaliation lawsuit for \$50,000 where African-American employee was discharged after complaining that white employee put hangman's noose around his neck and locked him in a tool shed, and white offender was rewarded with a higher-paying position	2010			x			x								x		x	x		concrete worker	
(3) <i>EEOC v. Danella Construction Co. of Pennsylvania</i> , 08-cv-03349 (E.D. Pa. December 1, 2009) (consent decree docketed)	Pennsylvania construction company specializing in utility industries settled sex discrimination and retaliation lawsuit for \$200,000 where woman working as a flagger and other female employees were not permitted to apply for substantially higher-paying labor positions because of their sex, and company failed to provide adequate restroom facilities at the worksite, forcing women to urinate outside in public	2009	x				x					x	x	x		x			x		flagger	
(4) <i>EEOC v. Wheeler Construction Inc.</i> , 07-cv-01829 (D. Ariz. March 5, 2009) (consent decree)	Arizona construction company settled national origin harassment and retaliation lawsuit for \$325,000 where Mexican- American employees were subject to anti-Hispanic slurs on a daily basis and terminated after complaining to management about the harassment	2009				x			x							x		x	x		concrete worker	laborer
(5) <i>EEOC v. Hamlet Development, JVR.</i> 808359 (Utah State Court July 2007)(Settlement)	Utah home builder settled sex discrimination and retaliation claims for \$174,186. Seven female employees alleged that they were subjected to sexually offensive emails and jokes by the president of the company who created a hostile work environment with his harassment. One of the plaintiffs further alleged that she was wrongfully terminated in retaliation for complaining of the harassment.	2007				x	x									x		x	x		unknown	
(6) <i>EEOC v. Cleveland Construction, Inc.</i> , 2:04-cv-02730-SHM (W.D. Tennessee Dec. 2, 2006) (consent decree)	General contractor with offices throughout US agreed to pay \$93,875 to settle race discrimination lawsuit brought on behalf of black male employees who worked on the construction of the Fedex Forum in Memphis alleging that African American males were wrongfully terminated from their carpenter and laborer jobs because of their race and replaced with Hispanic workers without completed job applications, experience or qualifications.	2006			x			x										x	x		carpenter	laborer
(7) <i>EEOC v. Trataros Construction, Inc.</i> , 01-CV-5127 (E.D.N.Y. March 16, 2005) (consent decree)	New York construction company paid \$355,000 to settle sex discrimination and retaliation lawsuit where women were subjected to sexually hostile work environment, assigned cleaning and loading duties while men were assigned to jobs requiring skill such as demolition and operating electrical machinery, and denied work and refused rehired for complaining about discriminatory treatment	2005	x				x							x		x		x	x		laborer	

(8)	<i>EEOC v. Recon Refractory & Construction</i> , 04-cv-6078-DDP (CTx) (C.D.Cal. Oct, 27, 2005) (consent decree)	California refinery construction company paid \$165,000 in monetary relief and established goals for hiring women into laborer positions to settle sex discrimination lawsuit where company did not hire women for the 300 laborer positions for which it advertised	2005		x	x		x		x		laborer
(9)	<i>EEOC v. AE Sweeney Masonry, Inc.</i> , 05-CV-02577-RBD (D. Md. March 31, 2006) (consent decree)	Construction company doing business in Maryland, Pennsylvania, and Virginia paid \$60,000 to settle racial harassment and retaliation lawsuit where the only black employees were subjected to racially hostile work environment consisting of racial epithets, slurs, and comments, and subjected to less favorable terms and conditions of employment	2006	x		x			x	x	x	laborer, fork lift operator
(10)	<i>EEOC v. Iron City Constructors, Inc. and The Boldt Co.</i> , 05-CV-0386 S (W.D. Wis. November 23, 2005) (Boldt) and December 16, 2005 (Iron City) (consent decrees)	Wisconsin general contractor and Pennsylvania metal sheeting subcontractor settled race discrimination and retaliation lawsuit for \$275,000 where African-American employees were subject to a racially hostile work environment as evidenced in racial graffiti in the port-a-johns at the construction site, supervisory personnel's use of abusive and racially derogatory language, and assignment to the most dangerous jobs, and were laid off after complaining about working conditions	2005		x	x		x		x	x	iron worker
(11)	<i>EEOC v. Conectiv, et al</i> , 05-CV-03389-TMG (E.D. Pa. May 8, 2008) (consent decree)	Pennsylvania general contractor and several subcontractors on a power plant construction project paid \$1,650,000 in settlement of a racial harassment lawsuit where African American employees working at construction site in Bethlehem, PA were subjected to egregious racial harassment including racial slurs, graffiti, and threats by hangman's nooses	2008	x		x			x		x	iron worker
(12)	<i>EEOC v. International Association of Bridge, Structural and Ornamental Ironworkers, Local 580, et al</i> , 71-CV-02877 (S.D.N.Y. May 8, 2007) (consent judgment granting approval of partial settlement)	New York local of construction trade union paid \$800,000 in partial settlement of contempt action filed by EEOC charging that union failed and refused to refer nonwhite journeyperson workers on the same basis it referred its white journey workers because of their race and national origin in violation of the terms of a 1978 consent judgment and previous court orders on the referral of journeypersons	2007	x		x	x		x		x	iron worker
(13)	<i>EEOC v. Washington Group International, Inc.</i> , 04-cv-12097 (D. Mass. March 17, 2008) (consent decree)	Massachusetts construction firm paid \$1.5 million to settle racial harassment and retaliation lawsuit where African American workers were subjected racially offensive language and graffiti and other forms of harassment at power plant construction project in Massachusetts and retaliated against them for complaining about it	2008	x		x			x	x	x	unknown
(14)	<i>EEOC v. Pace Services Inc.</i> , 08-cv-2886 (S.D. Tex. 2010) (consent decree)	Houston-area construction company to pay \$122,000 to resolve religious, race, and national origin discrimination lawsuit where employee was subjected to harassment in the workplace because he was Muslim and of East Indian descent and other employees were subject to racial harassment because they were black or Hispanic	2010		x	x	x		x		x	unknown
(15)	<i>EEOC v. Trans Bay Steel Corp</i> , 06-CV-07766 (C.D. Cal. December 14, 2006) (consent decree)	Small California construction company agreed to provide monetary relief valued at approximately \$1 million to settle national origin discrimination lawsuit where some Thai welders who came to US under guest worker visas were employed by the company but not paid the prevailing wage as promised, and other Thai welders were subjected to egregious types of exploitation and discrimination	2006		x		x	x		x		welder
(16)	<i>EEOC v. Concrete Applied Construction Technologies Corp d/b/a CATCO Construction Co.</i> , 03-CV-0t701 (W.D.N.Y. November 18, 2007) (consent decree)	New York highway construction firm paid \$100,000 to settle race discrimination lawsuit where African American operating engineer applied repeatedly for employment over a six-year period but was not hired despite being fully certified	2007	x		x		x			x	operating engineer

(17)	<i>EEOC v. Ceisel Masonry, Inc.</i> , 06-cv-2075 (N.D. Ill. May 22, 2009) (consent decree)	Illinois construction company paid \$500,000 to settle a race and national origin discrimination lawsuit where non-white Hispanic workers were subject to a hostile work environment, and routinely subjected to racially derogatory language and racist graffiti because of their race and national origin	2009	x		x		x	x	unknown
(18)	<i>EEOC v. Dan Lepore & Sons and L.F. Driscoll</i> , 03-CV-5462-LDD (E.D. Pa. Feb. 24, 2005)(consent decree)	Philadelphia area masonry contractor and company that manages construction projects in the Mid-Atlantic region, paid \$75,000 to settle individual sex discrimination lawsuit brought by only female stone mason in her local bricklayers' union where charging party was subjected to sexually hostile work environment and retaliated against for complaining about the harassment in that she was evicted from job site and not hired for work on other projects. Under the 3-year consent decree the masonry contractor also agreed to reinstate the charging party as a stone mason and guarantee her at least 1 year's work on a construction project in New Jersey	2005	x		x		x	x	stone mason
(19)	<i>EEOC v. Greater Metroplex Interiors</i> , 08-cv-01362 (N.D. Tex. September 15, 2009) (consent decree)	Commercial drywall and acoustics company based in Texas paid \$60,000 in back pay and \$54,000 in compensatory damages and attorneys fees to settle sexual harassment and retaliation lawsuit where female laborer was subjected to sexually explicit remarks, conduct, and graffiti for the duration of her employment and fired after she complained about it	2009		x	x		x	x	laborer
(20)	<i>EEOC v. C.G. Schmidt, Inc.</i> , 670 F.Supp.2d 858 (E.D. Wisconsin 2009) (Consent Order January 7, 2010)	Court found evidence presented on summary judgment motion sufficient to allow retaliatory discharge case brought against Massachusetts construction contractor to proceed to trial. African-male employed as a journeyman carpenter filed complaint with EEOC complaining about job transfer and terminated two month's later. Court found EEOC had provided sufficient evidence that to infer a causal link between the carpenter's protected activity and the adverse employment action – dismissal (Case settled January, 2010 Company paid \$85,000 --\$42,500 in back pay and \$42,500 in compensatory damages)	2009		x		x		x	carpenter
(21)	<i>Estrada v. Security Barricade, Inc. et al</i> , 05-cv- 5124, 2006 WL 753241 (W.D. Wash. March 22, 2006)	Court denied defendant union's motion for summary judgment and court held that plaintiff could proceed to trial on her charge that the union discriminated against her because of sex by denying her referrals to flagging jobs, finding that prima facie case of gender discrimination by showing that she had completed the state required flagging certification course. (Case settled April 17, 2006)	2006		x	x			x	flagger
(22)	<i>Floyd v. Southeast Cherokee Construction Inc.</i> , 07-cv-577, 2008 WL 3349125 (M.D.Ala. 2008)	Court found that African American dump truck driver who brought race discrimination and relation lawsuit against Alabama construction company offered sufficient evidence to establish prima facie case that he was terminated from his position because of race and to create a question for jury as to whether defendant proffered reasons for his termination were pretextual (Case settled Sept. 16, 2008)	2008		x			x	x	truck driver
(23)	<i>EEOC v. KCD Construction, Inc.</i> , 05-cv-2122, 2007 WL 1129220 (D. Minn. 2007)	Court denied summary judgment motion of Minnesota construction company engaged in concrete work, and allowed charge that Minnesota construction company engaged in a pattern or practice of national origin discrimination by subjecting Hispanic workers to hostile work environment (Consent decree July 25, 2007, company paid \$41,5000)	2007		x			x		unknown
(24)	<i>EEOC v. Rock Concrete Construction Corp.</i> , 09-cv-1222 (S.D. Ind. Dec. 28. 2009) (consent decree)	Indiana construction company paid \$31,000 to settle retaliation lawsuit where concrete worker was not provided work because he refused to drop the discrimination lawsuit filed against his former employer	2009		x		x		x	concrete worker

(25)	<i>Moses v. Sova Steel</i> , 2006 WL 5097690 (Mich. Cir. Ct. March 20, 2006) (settlement)	Michigan construction company paid \$20,000 to settle race discrimination lawsuit brought by black ironworkers alleging that company laid two of them off them and refused to hire a third because they were black	2006	x	x	x	x	x	iron worker
(26)	<i>Thomas O'Connor Constructors Inc. v. Massachusetts Commission Against Discrimination</i> , 12 Mass. App. Ct. 549 (2008)	Massachusetts general contractor held liable under Mass. employment discrimination statute to employee of a subcontractor for racially hostile work environment created by the general contractor's job site superintendent daily use of racial epithets and ordered to pay African American employee of subcontractor \$50,000 and conduct annual harassment training for five years	2008	x	x		x	x	laborer
(27)	<i>Massachusetts Commission Against Discrimination and Herbert Johnson v. Lojek Company, Inc. et al</i> , 2009 WL 105808 (MCAD April 16, 2009)	Small commercial and residential construction company found liable under Mass. employment discrimination statute for tolerating the creation of a racially hostile work environment and retaliating against the black worker after he protested the racial comments and filed a complaint with MCAD by transferring him to another job site and subsequently terminated in his employment. No backpay award because plaintiff failed to mitigate damages by looking for employment	2009	x	x		x	x	laborer
(28)	<i>Massachusetts Commission Against Discrimination and Mark Griffin v. Eastern Contractors, Inc. and S&R Construction Co. and Massachusetts Commission Against Discrimination and Clarence Leftwich v. Eastern Contractors, Inc.</i> , 2008 WL 4603340 (MCAD October 8, 2008)	General contractor found liable under Mass. employment discrimination statute for tolerating racially hostile and abusive work environment and retaliation where the general contractor's site superintendent used offensive racial epithets in the presence of an African American equipment operator, and General contractor demoted and terminated complainant after he complained about the racially offensive language and filed a complaint with MCAD. General contractor ordered to pay complainant \$100,000 in compensatory damages and \$18,062.00 in backpay. Subcontractor held liable because it had notice that its employee Mark Griffin was subjected to the racially hostile environment created by the General contractors' supervisory employees and failed to remedy it, and retaliated against Griffin by terminating his employment after he complained about the racially abusive language and filed a complaint with MCAD. Subcontractor ordered to pay Griffin \$100,000 in compensatory damages and \$19,609.68 in backpay.	2008	x	x		x	x	laborer, equipment operator
(29)	<i>EEOC v. West Roofing Systems</i> , 07-cv-03249JFA (D.S.C. July 25, 2008) (consent decree)	Georgia roofing contractor doing business in South Carolina paid \$12,000 to settle sex discrimination lawsuit where company failed to hire female applicant as a temporary laborer, but continued to hire male laborers	2008		x	x		x	laborer
(30)	<i>EEOC v. Laroy Thomas Inc.</i> , 05-cv-00183 (E.D. Tex. October 23, 2007) (consent decree)	Construction company paid \$15,000 to settle racial harassment lawsuit where black male sheet metal worker was subjected to inappropriate racist remarks on a daily basis	2007		x		x	x	sheet metal worker
(31)	<i>EEOC v. B & J Excavating , Inc.</i> , 07-cv- 03480 JF (E.D. Pa. January 2, 2008) (consent decree)	Pennsylvania construction company paid \$27,000 to settle race discrimination lawsuit where black male pipe layer was laid off following snowstorm and not recalled, but white workers were recalled and other white workers were hired	2008	x		x		x	pipe layer

(32)	<i>Hale v. Jones Lee Construction</i> , 2009 WL 2003306 (Mo.Cir. March 13, 2009)	Woman, who worked for construction company as a driver, tool person, and runner, filed a lawsuit under Missouri Human Rights Act against the company alleging that the foreman harassed her because of her gender and retaliated against her when she complained about the harassment by terminating her employment. Jury returned a verdict in her favor on the harassment claim and awarded \$10,000 in damages. (Court ordered company to pay \$65,000 in attorney fees; verdict in favor of defendant on retaliation claim; jury found plaintiff terminated for a non-retaliatory reason -- lack of work)	2009	x	x	x	x	x	runner, driver
(33)	<i>Stout v. Asplundh Construction Corp.</i> , 2008 WL 7193754 (E.D. Mich. 2008)	Woman journeyman lineman in the electrical line trade and union member filed sex discrimination lawsuit under Title VII against Asplundh alleging that the company refused to hire her because of her gender until she filed EEOC charge. Company hired her in an attempt to avoid lawsuit, but treated her adversely because of gender by denying her "lead" and "foreman" assignments, and constructively discharged her. Jury found that company discriminated against plaintiff by failing to hire her, but that it did not constructively discharge plaintiff. Jury awarded plaintiff \$395,000 (\$15,000 for past wages, \$200,000 for past non-economic damages, and an additional \$180,000 in punitive damages)	2008	x	x	x		x	electrician
(34)	<i>Maalik v. International Union of Elevator Constructors, Local 2</i> , 437 F.3d 659 (7th Cir. 2006)	Seventh Circuit held local union liable under Title VII for its decision to nothing in response to mechanics' alleged discriminatory refusal to train black female member of elevator union. Despite having worked 3 years as "helper" (apprentice), taken classroom training, and passed examination, union member could not get mechanic's license because master mechanics refused to provide her on-the-job training (Case settled 8/7/2006)	2006	x	x	x	x	x	elevator mechanic
(35)	<i>EEOC v. Dollins Construction Co.</i> , 09-CV-00137 (E.D. Mo. May 20, 2010) (consent decree)	Missouri construction company paid \$15,000 to settle race harassment and retaliation lawsuit where three black construction workers were subjected to racial harassment at worksite that included racially charged comments and a display of a noose, and after one complained of harassment to business owner they were not sent out on any further jobs	2010	x	x	x	x	x	laborer
(36)	<i>United States v. City of New York</i> , 07 Civ. 2083 (WHP), 2010 U.S. Dist. LEXIS 47267 (S.D.N.Y. May 13, 2010).	Court found that the New York City Department of Transportation had engaged in a pattern or practice of "unvarnished sex discrimination" by refusing to hire plaintiffss as bridge painters, despite their years of painting experience in the private sector, solely because they were women.	2010	x	x	x		x	bridge painter
(37)	<i>John Doe I, et al. v. Mulcahy, Inc. et. al</i> , 08-cv-00306 (D. Minn. May 24, 2010)(Order Approving Settlement)	Minnesota drywall commercial construction company agreed to pay between \$2.5 million and \$6 million, depending on the timing of payment, to settle lawsuit brought by Latino immigrant workers who alleged that company discriminated against them because of their race and national origin when it paid them less than their white co-workers. Complaint alleged Latino workers were almost always paid in cash without accompanying employee benefits and not paid overtime rates for overtime worked, while non-Latino, native-born peers were paid at much higher rates and provided benefits in compliance with Federal and state law	2010	x	x	x		x	drywall

(38)	<i>Randolph v. Indiana Regional Council of Carpenters and Millwrights, Millwright Local Union 1003</i> , 2007 WL 1702022 (S.D. Ind. March 8, 2007)	Jury awarded female millwright (construction worker who does welding, bolting, and other metal work) \$20,000 in back pay and \$25,000 punitive damages in sex after finding union discriminated against the plaintiff because of her sex by refusing to place her on the out-of-work list for referrals to millwright jobs. Court denied union's motion for judgment notwithstanding verdict finding no manifest error of law or fact in the back pay award and that the award of punitive damages was appropriate and not excessive	2007	x	x	x	x	millwright
(39)	<i>Bowles v. Osmose Utilities Service Inc.</i> , 443 F.3d 671 (8 th Cir. 2006)	Eight circuit affirmed District court's award of \$20,000 in compensatory damages, and \$80,000 in punitive damages to black member of utility pole treatment crew who brought lawsuit under 42 U.S.C. § 1981 alleging that he was subjected to a racially hostile work environment where foreman peppered black crew members with racial insults	2006	x	x	x	x	utility pole treater
(40)	<i>EEOC v. L.A. Pipeline Construction Co.</i> , 08-cv-840 (S.D. Ohio June 8, 2010)	EEOC brought racial harassment lawsuit alleging that Ohio construction company, engaged in the business of building and maintaining pipelines used to transport natural gas, created a hostile work environment for a class of black employees through exposure to nooses, a racial epithets, and other racially offensive behavior. In denying summary judgment as to the claims of some of the class of the class members, the court held that the company's awareness of racial harassment by co-workers of black employees and the reasonable of its responses to such harassment must be resolved by a jury (Workers on crews from four crafts – equipment operators, laborers, teamsters, and welders)	2010	x	x	x	x	welder laborer, teamster, equipment operator
(41)	<i>Carl Carpenter and Chinh Q. LE, Director, New Jersey Division on Civil Rights v. C.B.M. et. al</i> , DCR Docket No. EC24WB-60143, (Office of Attorney General September 25, 2009)	Director found probable cause existed to credit allegations of complaint filed under the New Jersey Law Against Discrimination alleging that construction and renovation company subjected complainant to a racially hostile work environment and discharged him from his position as carpenter because of his race (Black)	2009	x	x	x	x	carpenter
(42)	<i>Jon Stokes and C. Carlos Bellido, Acting Director, New Jersey Division on Civil Rights, v. Plumbers & Pipefitters Local Union No. 9</i> , DCR Docket No. EN12RU-60182, (Office of Attorney General June 11, 2009)	Director found probable cause existed to credit allegations of complaint filed under New Jersey Law Against Discrimination alleging that union removed the complainant from his position as shop steward because of his race (Black) and replaced him with a Caucasian employee	2009	x	x	x	x	plumber
(43)	<i>OFCCP v. Air Mechanical & Service Corporation</i> (Conciliation Agreement October 13, 2009)	Florida plumbing, air conditioning and heating contractor agreed to pay \$39,013.18 in back pay and interest to affected class of 12 minority employees in helper, service, and insulator job categories to resolve alleged violation identified during compliance evaluation that company paid minority employees less than similarly situated non-minorities. Contractor also agreed to provide \$30,160.00 in salary adjustments	2009	x	x	x	x	helper, insulator
(44)	<i>OFCCP v. APAC-Tennessee Inc.</i> (Conciliation Agreement September 8, 2008)	Asphalt paving contractor agreed to pay \$54,221 in back pay to an affected class of 76 qualified black applicants to resolve alleged violation identified during compliance evaluation that company discriminated against black applicants for laborer positions because of their race. Company also agreed to make written job offers to qualified class members until 15 accepted jobs	2008	x	x	x	x	laborer

[illegible]

APPENDIX E

Appendix Table E.1
Potential Sources of Data on the Number and Characteristics of Firms in the Construction Industry

(a) Database	(b) Federal Procurement System		(c) Federal Procurement System		(d) U.S. Census Bureau		
	Federal Central Contract Register (CCR)	Contract Register	Federal Procurement Data System (FPDS)	Electronic Subcontracting Reporting System (eSRS)	Economic Census of the US	County Business Patterns	Statistics of United States Businesses
Agency or Organization Maintaining the Data Base	U.S. General Services Administration	U.S. General Services Administration	U.S. General Services Administration		U.S. Census Bureau	U.S. Census Bureau	U.S. Census Bureau
How is Data Gathered for the Data Base	Self reported as part of registration by firms that wish to contract with the federal government	Each Federal contract is entered by GSA	Firms holding one or more large federal contracts submit an Individual Subcontract Report for each large contract	The economic census covers nearly all businesses and industries in the private, non-farm U.S. Economy. Many small businesses with paid employees do not receive census forms--data are obtained from administrative sources. Although not every business receives a census form, the published totals reflect all covered businesses. The economic census includes only businesses with paid employees.		The Business Register is the Census Bureau's source for information on employer establishments included in County Business Patterns and ZIP Business Patterns.	2006 County Business Patterns
Website(s) Providing Description of Data Base	https://www.bpn.gov/ccr/default.aspx	https://www.fpds.gov	http://www.esrs.gov	http://www.census.gov/econ/census07/	http://www.census.gov/econ/cbp	http://www.census.gov/csd/susb	
What Firms of all Types are Included?	All US firms that have registered to work on federal contracts	All firms that hold federal contracts (not including subcontracts)	All firms that hold one or more large federal contracts	Businesses with paid employees	All US Firms	All US Firms	All US Firms
What Construction firms are Included?	All US firms that are registered to work on federal contracts	All contractors that have active contracts with the federal government	?	All US Firms	All US Firms	All US Firms	All US Firms
Number of Firms Included (All Types)	531,891	?	?	5,583,889	7,705,018	7,601,160	
Number of Firms Included (Construction)	109,207 firms	?	n/a (not a data set of individual firms)	728,020	811,452	802,349	
Most Recent Data Currently Available	4/15/2010	FY2009	?	2007	2007	2006	
How Frequently are Data Updated?	monthly	annually	?	Data from the 2007 Economic Census are released on a flow basis from March 2009 through mid-2011.	annually	annually	annually
Geographic Coverage of Data Set	All US	All US	All US	All US	All US	All US	All US
For What Geographic Units Can Data be Tabulated? (e.g., states, counties, zip codes, PUMAs, MSAs, etc.)	City, State, Zip Code	City, State, Zip Code	n/a (not a data set of individual firms)	State	State, MSA, County, Zip Code	US only	
For What Level of Industry Detail (NAICS digits) Can Data be Tabulated	any and all levels	2,3,4,5	n/a (not a data set of individual firms)	2,3	2,3,4,5	2,3,4,5	
Is Data Available for Public Use?	yes	yes	yes	Yes	Yes	Yes	Yes
Is there a charge for use?	no	no	no	no	no	no	no
Does the Data Set Include Firms' Total Revenues?	Annual Revenue	Can be obtained via match to CCR	n/a (not a data set of individual firms)	No	No	No	No
Does the Data Set Include Firms' Federal Contract Revenues?	Can be obtained via match to FPDS	Size of each contract	n/a (not a data set of individual firms)	No	No	No	No
Does the Data Set Include Firm's Number of Employees	Average number of employees	Can be matched to CCR	n/a (not a data set of individual firms)	No	Yes; '1-4' '5-9' '10-19' '20-49' '50-99' '100-249' '250-499' '500-999' '1000 or more'	Yes; '1-4' '5-9' '10-19' '20-49' '50-99' '100-249' '250-499' '500-999' '1000 or more'	
Does the Data Set Include Firm's Employee Payroll?	No	need to complete data access to determine	n/a (not a data set of individual firms)	No	Average payroll per employee count classification	Average payroll per employee count classification	
Does the Data Set Include any Other Information on Firm Size?	No	need to complete data access to determine	Reports subcontract funds awarded to firms owned by women, minorities	No	No	No	
Other Key info to note	Firms has multiple NAICS codes in this database, so "totals" based on different aggregation levels can yield different results depending on how a firm is categorized			This dataset only looks at NAICS size by state, so by firm analysis not possible		Should line up with 2006 CBP data; Column E represents 2007 CBP data	

Appendix Table E.1
Potential Sources of Data on the Number and Characteristics of Firms in the Construction Industry

(a)	(h)	(i)	(j)	(k)	(l)	(m)
Database	U.S. Census Bureau (cont'd)	EEOC	Non-Government Sources			
	Survey of Business Owners (SBO)	Job Patterns in Private Industry (EEO-1 Reports)	Dun & Bradstreet	Associated General Contractors of America	National Association of Women in Construction	NAICS Association
Agency or Organization Maintaining the Data Base	U.S. Census Bureau	U.S. EEOC	Dun & Bradstreet	Associated General Contractors of America		Dun & Bradstreet
How is Data Gathered for the Data Base	Summary Statistics based on the 2002 Economic Census	Employer EEO-1 reports submitted annually in August to the Joint Reporting Committee (EEOC/OFCCP)	?	Provided by members	No industry data available	No industry data available
Website(s) Providing Description of Data Base	http://www.census.gov/econ/sbo/	http://www.eeoc.gov	http://www.dnb.com	http://www.agc.org/	http://www.nawic.org	http://www.naics.com
What Firms of all Types are Included?	Nonfarm businesses and receipts of > \$1,000	All establishments in the U.S. with ≥ 100 employees (≥ 50 employees if a federal contractor)	All types	Construction contractors and suppliers of construction services & supplies	Members	
What Construction firms are Included?	All US Firms	All those meeting above size requirement	Almost all U.S. firms that file tax returns	Relatively small number of contractors compared to Census and other figures	Relatively small number of contractors compared to Census and other figures	
Number of Firms Included (All Types)	2,400,000	250,650 reports	17 million	33,000		13,791,844
Number of Firms Included (Construction)	729,842	8,401 reports	n/a	33,000 (7,500 general contractors, 12,500 specialty contractors, 13,000 providers of services & supplies)		1,440,911
Most Recent Data Currently Available	2007	2008	2009			
How Frequently are Data Updated?	every 5 years	annually	continuously			
Geographic Coverage of Data Set	All US Firms	50 states + DC	All US	n/a	n/a	n/a
For What Geographic Units Can Data be Tabulated? (e.g., states, counties, zip codes, PUMAs, MSAs, etc.)	?	National (to NAICS 5), state (to NAICS 3), CBSA (to NAICS 3)	City, State, Zip Code			
For What Level of Industry Detail (NAICS digits) Can Data be Tabulated	?	To NAICS 5 (national), NAICS 3 (states and CBSAs)	2,3,4,5			
Is Data Available for Public Use?	n/a	Tabulations available on-line, micro data not available	No	Yes	Yes	Yes
Is there a charge for use?	Yes	no	Yes (\$5,000 for 250,000 records, \$3500 for each additional 100,000 records)	No	No	No
Does the Data Set Include Firms' Total Revenues?	No	no	Yes	No	No	No
Does the Data Set Include Firms' Federal Contract Revenues?	No	no	No	No	No	No
Does the Data Set Include Firm's Number of Employees	No	Actual number of employees as of reporting date	Estimated employee counts per firm	No	No	No
Does the Data Set Include Firm's Employee Payroll?	No	no	No	No	No	No
Does the Data Set Include any Other Information on Firm Size?	No	no	No	No	No	No
Other Key info to note			Data tool can be demoed.	Membership list is too small to be useful.	Membership list is too small to be useful.	Provides sales and telemarketing lists and appends NAICS codes. These data are not considered useful or reliable.

Appendix Table E.2
Construction Firms, Nationwide,
by Number of Employees,
County Business Patterns 2008

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	NAICS Code		Industry Sector		Total Firms		Firm Counts by Number of Employees			
					1-4		5-9		10-19	
			N	%	N	%	N	%	N	%
(1)	236	Construction of Buildings	232,634	100.0%	167,290	71.9%	33,855	14.6%	17,405	7.5%
(2)	2361	Residential Building Construction	187,327	100.0%	146,576	78.2%	24,893	13.3%	10,061	5.4%
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	69,206	100.0%	53,436	77.2%	10,167	14.7%	3,897	5.6%
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	4,035	100.0%	2,454	60.8%	643	15.9%	445	11.0%
(5)	236117	New Housing Operative Builders	23,573	100.0%	16,705	70.9%	3,661	15.5%	1,611	6.8%
(6)	236118	Residential Remodelers	90,513	100.0%	73,981	81.7%	10,422	11.5%	4,108	4.5%
(7)	2362	Nonresidential Building Construction	45,307	100.0%	20,714	45.7%	8,962	19.8%	7,344	16.2%
(8)	236210	Industrial Building Construction	3,572	100.0%	1,676	46.9%	727	20.4%	539	15.1%
(9)	236220	Commercial and Institutional Building Construction	41,735	100.0%	19,038	45.6%	8,235	19.7%	6,805	16.3%
(10)	237	Heavy and Civil Engineering Construction	48,030	100.0%	24,597	51.2%	8,315	17.3%	6,301	13.1%
(11)	2371	Utility System Construction	20,944	100.0%	9,226	44.1%	4,084	19.5%	3,197	15.3%
(12)	237110	Water and Sewer Line and Related Structures Construction	13,269	100.0%	6,291	47.4%	2,769	20.9%	1,978	14.9%
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	1,946	100.0%	601	30.9%	266	13.7%	282	14.5%
(14)	237130	Power and Communication Line and Related Structures Construction	5,729	100.0%	2,334	40.7%	1,049	18.3%	937	16.4%
(15)	2372	Land Subdivision	10,814	100.0%	8,130	75.2%	1,479	13.7%	712	6.6%
(16)	237210	Land Subdivision	10,814	100.0%	8,130	75.2%	1,479	13.7%	712	6.6%
(17)	2373	Highway, Street, and Bridge Construction	11,509	100.0%	4,579	39.8%	1,930	16.8%	1,795	15.6%
(18)	237310	Highway, Street, and Bridge Construction	11,509	100.0%	4,579	39.8%	1,930	16.8%	1,795	15.6%
(19)	2379	Other Heavy and Civil Engineering Construction	4,763	100.0%	2,662	55.9%	822	17.3%	597	12.5%
(20)	237990	Other Heavy and Civil Engineering Construction	4,763	100.0%	2,662	55.9%	822	17.3%	597	12.5%
(21)	238	Specialty Trade Contractors	492,950	100.0%	311,635	63.2%	84,258	17.1%	50,608	10.3%
(22)	2381	Foundation, Structure, and Building Exterior Contractors	108,067	100.0%	67,163	62.1%	18,989	17.6%	11,191	10.4%
(23)	238110	Poured Concrete Foundation and Structure Contractors	24,663	100.0%	14,378	58.3%	4,649	18.9%	2,874	11.7%
(24)	238120	Structural Steel and Precast Concrete Contractors	3,743	100.0%	1,367	36.5%	719	19.2%	641	17.1%
(25)	238130	Framing Contractors	15,381	100.0%	10,678	69.4%	2,720	17.7%	1,096	7.1%
(26)	238140	Masonry Contractors	25,022	100.0%	16,329	65.3%	4,152	16.6%	2,270	9.1%
(27)	238150	Glass and Glazing Contractors	5,541	100.0%	2,673	48.2%	1,271	22.9%	876	15.8%
(28)	238160	Roofing Contractors	18,579	100.0%	10,955	59.0%	3,192	17.2%	2,186	11.8%
(29)	238170	Siding Contractors	9,436	100.0%	7,171	76.0%	1,329	14.1%	601	6.4%
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	5,702	100.0%	3,612	63.3%	957	16.8%	647	11.3%
(31)	2382	Building Equipment Contractors	184,132	100.0%	106,496	57.8%	34,895	19.0%	21,854	11.9%
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	78,026	100.0%	45,922	58.9%	14,564	18.7%	8,900	11.4%
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	99,190	100.0%	57,523	58.0%	19,069	19.2%	11,931	12.0%
(34)	238290	Other Building Equipment Contractors	6,916	100.0%	3,051	44.1%	1,262	18.2%	1,023	14.8%
(35)	2383	Building Finishing Contractors	126,100	100.0%	88,807	70.4%	18,309	14.5%	10,318	8.2%
(36)	238310	Drywall and Insulation Contractors	21,268	100.0%	12,217	57.4%	3,389	15.9%	2,514	11.8%
(37)	238320	Painting and Wall Covering Contractors	38,567	100.0%	28,241	73.2%	5,586	14.5%	2,759	7.2%
(38)	238330	Flooring Contractors	16,070	100.0%	12,116	75.4%	2,126	13.2%	1,063	6.6%
(39)	238340	Tile and Terrazzo Contractors	11,209	100.0%	8,007	71.4%	1,545	13.8%	945	8.4%
(40)	238350	Finish Carpentry Contractors	32,054	100.0%	24,248	75.6%	4,399	13.7%	2,142	6.7%
(41)	238390	Other Building Finishing Contractors	6,932	100.0%	3,978	57.4%	1,264	18.2%	895	12.9%
(42)	2389	Other Specialty Trade Contractors	74,651	100.0%	49,169	65.9%	12,065	16.2%	7,245	9.7%
(43)	238910	Site Preparation Contractors	40,689	100.0%	25,974	63.8%	6,651	16.3%	4,142	10.2%
(44)	238990	All Other Specialty Trade Contractors	33,962	100.0%	23,195	68.3%	5,414	15.9%	3,103	9.1%
(45)	23	All Construction Firms	773,614	100.0%	503,522	65.1%	126,428	16.3%	74,314	9.6%

Appendix Table E.2
Construction Firms, Nationwide,
by Number of Employees,
County Business Patterns 2008

	(a)	(b)	(c)	(d)	(k)	(l)	(m)	(n)	(o)	(p)
					Firm Counts by Number of Employees					
	NAICS Code	Industry Sector	Total Firms		20-49		50-99		100-249	
			N	%	N	%	N	%	N	%
(1)	236	Construction of Buildings	232,634	100.0%	9,822	4.2%	2,703	1.2%	1,201	0.5%
(2)	2361	Residential Building Construction	187,327	100.0%	4,277	2.3%	1,029	0.5%	396	0.2%
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	69,206	100.0%	1,366	2.0%	240	0.3%	73	0.1%
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	4,035	100.0%	312	7.7%	105	2.6%	56	1.4%
(5)	236117	New Housing Operative Builders	23,573	100.0%	970	4.1%	402	1.7%	188	0.8%
(6)	236118	Residential Remodelers	90,513	100.0%	1,629	1.8%	282	0.3%	79	0.1%
(7)	2362	Nonresidential Building Construction	45,307	100.0%	5,545	12.2%	1,674	3.7%	805	1.8%
(8)	236210	Industrial Building Construction	3,572	100.0%	372	10.4%	116	3.2%	90	2.5%
(9)	236220	Commercial and Institutional Building Construction	41,735	100.0%	5,173	12.4%	1,558	3.7%	715	1.7%
(10)	237	Heavy and Civil Engineering Construction	48,030	100.0%	5,152	10.7%	2,000	4.2%	1,190	2.5%
(11)	2371	Utility System Construction	20,944	100.0%	2,643	12.6%	985	4.7%	553	2.6%
(12)	237110	Water and Sewer Line and Related Structures Construction	13,269	100.0%	1,471	11.1%	489	3.7%	217	1.6%
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	1,946	100.0%	330	17.0%	194	10.0%	165	8.5%
(14)	237130	Power and Communication Line and Related Structures Construction	5,729	100.0%	842	14.7%	302	5.3%	171	3.0%
(15)	2372	Land Subdivision	10,814	100.0%	323	3.0%	108	1.0%	50	0.5%
(16)	237210	Land Subdivision	10,814	100.0%	323	3.0%	108	1.0%	50	0.5%
(17)	2373	Highway, Street, and Bridge Construction	11,509	100.0%	1,775	15.4%	744	6.5%	510	4.4%
(18)	237310	Highway, Street, and Bridge Construction	11,509	100.0%	1,775	15.4%	744	6.5%	510	4.4%
(19)	2379	Other Heavy and Civil Engineering Construction	4,763	100.0%	411	8.6%	163	3.4%	77	1.6%
(20)	237990	Other Heavy and Civil Engineering Construction	4,763	100.0%	411	8.6%	163	3.4%	77	1.6%
(21)	238	Specialty Trade Contractors	492,950	100.0%	31,647	6.4%	9,474	1.9%	4,208	0.9%
(22)	2381	Foundation, Structure, and Building Exterior Contractors	108,067	100.0%	7,162	6.6%	2,329	2.2%	992	0.9%
(23)	238110	Poured Concrete Foundation and Structure Contractors	24,663	100.0%	1,826	7.4%	568	2.3%	265	1.1%
(24)	238120	Structural Steel and Precast Concrete Contractors	3,743	100.0%	594	15.9%	255	6.8%	141	3.8%
(25)	238130	Framing Contractors	15,381	100.0%	552	3.6%	193	1.3%	122	0.8%
(26)	238140	Masonry Contractors	25,022	100.0%	1,493	6.0%	528	2.1%	199	0.8%
(27)	238150	Glass and Glazing Contractors	5,541	100.0%	527	9.5%	131	2.4%	54	1.0%
(28)	238160	Roofing Contractors	18,579	100.0%	1,581	8.5%	485	2.6%	163	0.9%
(29)	238170	Siding Contractors	9,436	100.0%	264	2.8%	54	0.6%	12	0.1%
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	5,702	100.0%	325	5.7%	115	2.0%	36	0.6%
(31)	2382	Building Equipment Contractors	184,132	100.0%	14,035	7.6%	4,244	2.3%	2,017	1.1%
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	78,026	100.0%	5,726	7.3%	1,762	2.3%	880	1.1%
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	99,190	100.0%	7,338	7.4%	2,132	2.1%	926	0.9%
(34)	238290	Other Building Equipment Contractors	6,916	100.0%	971	14.0%	350	5.1%	211	3.1%
(35)	2383	Building Finishing Contractors	126,100	100.0%	6,061	4.8%	1,704	1.4%	712	0.6%
(36)	238310	Drywall and Insulation Contractors	21,268	100.0%	1,917	9.0%	730	3.4%	377	1.8%
(37)	238320	Painting and Wall Covering Contractors	38,567	100.0%	1,465	3.8%	359	0.9%	130	0.3%
(38)	238330	Flooring Contractors	16,070	100.0%	592	3.7%	126	0.8%	43	0.3%
(39)	238340	Tile and Terrazzo Contractors	11,209	100.0%	523	4.7%	142	1.3%	40	0.4%
(40)	238350	Finish Carpentry Contractors	32,054	100.0%	996	3.1%	192	0.6%	66	0.2%
(41)	238390	Other Building Finishing Contractors	6,932	100.0%	568	8.2%	155	2.2%	56	0.8%
(42)	2389	Other Specialty Trade Contractors	74,651	100.0%	4,389	5.9%	1,197	1.6%	487	0.7%
(43)	238910	Site Preparation Contractors	40,689	100.0%	2,726	6.7%	787	1.9%	342	0.8%
(44)	238990	All Other Specialty Trade Contractors	33,962	100.0%	1,663	4.9%	410	1.2%	145	0.4%
(45)	23	All Construction Firms	773,614	100.0%	46,621	6.0%	14,177	1.8%	6,599	0.9%

Appendix Table E.2
Construction Firms, Nationwide,
by Number of Employees,
County Business Patterns 2008

	(a)	(b)	(c)	(d)	(q)	(r)	(s)	(t)	(u)	(v)
					Firm Counts by Number of Employees					
	NAICS Code	Industry Sector	Total Firms		250-499		500-999		1,000 +	
			N	%	N	%	N	%	N	%
(1)	236	Construction of Buildings	232,634	100.0%	242	0.1%	86	0.0%	30	0.0%
(2)	2361	Residential Building Construction	187,327	100.0%	69	0.0%	22	0.0%	4	0.0%
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	69,206	100.0%	19	0.0%	8	0.0%	0	0.0%
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	4,035	100.0%	13	0.3%	6	0.1%	1	0.0%
(5)	236117	New Housing Operative Builders	23,573	100.0%	27	0.1%	6	0.0%	3	0.0%
(6)	236118	Residential Remodelers	90,513	100.0%	10	0.0%	2	0.0%	0	0.0%
(7)	2362	Nonresidential Building Construction	45,307	100.0%	173	0.4%	64	0.1%	26	0.1%
(8)	236210	Industrial Building Construction	3,572	100.0%	30	0.8%	16	0.4%	6	0.2%
(9)	236220	Commercial and Institutional Building Construction	41,735	100.0%	143	0.3%	48	0.1%	20	0.0%
(10)	237	Heavy and Civil Engineering Construction	48,030	100.0%	317	0.7%	93	0.2%	65	0.1%
(11)	2371	Utility System Construction	20,944	100.0%	156	0.7%	51	0.2%	49	0.2%
(12)	237110	Water and Sewer Line and Related Structures Construction	13,269	100.0%	46	0.3%	6	0.0%	2	0.0%
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	1,946	100.0%	59	3.0%	23	1.2%	26	1.3%
(14)	237130	Power and Communication Line and Related Structures Construction	5,729	100.0%	51	0.9%	22	0.4%	21	0.4%
(15)	2372	Land Subdivision	10,814	100.0%	6	0.1%	2	0.0%	4	0.0%
(16)	237210	Land Subdivision	10,814	100.0%	6	0.1%	2	0.0%	4	0.0%
(17)	2373	Highway, Street, and Bridge Construction	11,509	100.0%	132	1.1%	32	0.3%	12	0.1%
(18)	237310	Highway, Street, and Bridge Construction	11,509	100.0%	132	1.1%	32	0.3%	12	0.1%
(19)	2379	Other Heavy and Civil Engineering Construction	4,763	100.0%	23	0.5%	8	0.2%	0	0.0%
(20)	237990	Other Heavy and Civil Engineering Construction	4,763	100.0%	23	0.5%	8	0.2%	0	0.0%
(21)	238	Specialty Trade Contractors	492,950	100.0%	855	0.2%	198	0.0%	67	0.0%
(22)	2381	Foundation, Structure, and Building Exterior Contractors	108,067	100.0%	190	0.2%	34	0.0%	17	0.0%
(23)	238110	Poured Concrete Foundation and Structure Contractors	24,663	100.0%	72	0.3%	20	0.1%	11	0.0%
(24)	238120	Structural Steel and Precast Concrete Contractors	3,743	100.0%	21	0.6%	4	0.1%	1	0.0%
(25)	238130	Framing Contractors	15,381	100.0%	16	0.1%	3	0.0%	1	0.0%
(26)	238140	Masonry Contractors	25,022	100.0%	47	0.2%	3	0.0%	1	0.0%
(27)	238150	Glass and Glazing Contractors	5,541	100.0%	9	0.2%	0	0.0%	0	0.0%
(28)	238160	Roofing Contractors	18,579	100.0%	15	0.1%	1	0.0%	1	0.0%
(29)	238170	Siding Contractors	9,436	100.0%	3	0.0%	1	0.0%	1	0.0%
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	5,702	100.0%	7	0.1%	2	0.0%	1	0.0%
(31)	2382	Building Equipment Contractors	184,132	100.0%	433	0.2%	119	0.1%	39	0.0%
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	78,026	100.0%	192	0.2%	65	0.1%	15	0.0%
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	99,190	100.0%	206	0.2%	48	0.0%	17	0.0%
(34)	238290	Other Building Equipment Contractors	6,916	100.0%	35	0.5%	6	0.1%	7	0.1%
(35)	2383	Building Finishing Contractors	126,100	100.0%	153	0.1%	30	0.0%	6	0.0%
(36)	238310	Drywall and Insulation Contractors	21,268	100.0%	101	0.5%	20	0.1%	3	0.0%
(37)	238320	Painting and Wall Covering Contractors	38,567	100.0%	20	0.1%	5	0.0%	2	0.0%
(38)	238330	Flooring Contractors	16,070	100.0%	4	0.0%	0	0.0%	0	0.0%
(39)	238340	Tile and Terrazzo Contractors	11,209	100.0%	7	0.1%	0	0.0%	0	0.0%
(40)	238350	Finish Carpentry Contractors	32,054	100.0%	9	0.0%	2	0.0%	0	0.0%
(41)	238390	Other Building Finishing Contractors	6,932	100.0%	12	0.2%	3	0.0%	1	0.0%
(42)	2389	Other Specialty Trade Contractors	74,651	100.0%	79	0.1%	15	0.0%	5	0.0%
(43)	238910	Site Preparation Contractors	40,689	100.0%	55	0.1%	11	0.0%	1	0.0%
(44)	238990	All Other Specialty Trade Contractors	33,962	100.0%	24	0.1%	4	0.0%	4	0.0%
(45)	23	All Construction Firms	773,614	100.0%	1,414	0.2%	377	0.0%	162	0.0%

Appendix Table E.3
Construction Firms, Nationwide,
by Number of Employees,
County Business Patterns 2008

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
			Cumulative % of Firms by Number of Employees								
	NAICS Code	Industry Sector	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000 +
(1)	236	Construction of Buildings	71.9%	86.5%	93.9%	98.2%	99.3%	99.8%	100.0%	100.0%	100.0%
(2)	2361	Residential Building Construction	78.2%	91.5%	96.9%	99.2%	99.7%	99.9%	100.0%	100.0%	100.0%
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	77.2%	91.9%	97.5%	99.5%	99.9%	100.0%	100.0%	100.0%	100.0%
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	60.8%	76.8%	87.8%	95.5%	98.1%	99.5%	99.8%	100.0%	100.0%
(5)	236117	New Housing Operative Builders	70.9%	86.4%	93.2%	97.3%	99.0%	99.8%	100.0%	100.0%	100.0%
(6)	236118	Residential Remodelers	81.7%	93.2%	97.8%	99.6%	99.9%	100.0%	100.0%	100.0%	100.0%
(7)	2362	Nonresidential Building Construction	45.7%	65.5%	81.7%	93.9%	97.6%	99.4%	99.8%	99.9%	100.0%
(8)	236210	Industrial Building Construction	46.9%	67.3%	82.4%	92.8%	96.0%	98.5%	99.4%	99.8%	100.0%
(9)	236220	Commercial and Institutional Building Construction	45.6%	65.3%	81.7%	94.0%	97.8%	99.5%	99.8%	100.0%	100.0%
(10)	237	Heavy and Civil Engineering Construction	51.2%	68.5%	81.6%	92.4%	96.5%	99.0%	99.7%	99.9%	100.0%
(11)	2371	Utility System Construction	44.1%	63.6%	78.8%	91.4%	96.1%	98.8%	99.5%	99.8%	100.0%
(12)	237110	Water and Sewer Line and Related Structures Construction	47.4%	68.3%	83.2%	94.3%	98.0%	99.6%	99.9%	100.0%	100.0%
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	30.9%	44.6%	59.0%	76.0%	86.0%	94.5%	97.5%	98.7%	100.0%
(14)	237130	Power and Communication Line and Related Structures Construction	40.7%	59.1%	75.4%	90.1%	95.4%	98.4%	99.2%	99.6%	100.0%
(15)	2372	Land Subdivision	75.2%	88.9%	95.4%	98.4%	99.4%	99.9%	99.9%	100.0%	100.0%
(16)	237210	Land Subdivision	75.2%	88.9%	95.4%	98.4%	99.4%	99.9%	99.9%	100.0%	100.0%
(17)	2373	Highway, Street, and Bridge Construction	39.8%	56.6%	72.2%	87.6%	94.0%	98.5%	99.6%	99.9%	100.0%
(18)	237310	Highway, Street, and Bridge Construction	39.8%	56.6%	72.2%	87.6%	94.0%	98.5%	99.6%	99.9%	100.0%
(19)	2379	Other Heavy and Civil Engineering Construction	55.9%	73.1%	85.7%	94.3%	97.7%	99.3%	99.8%	100.0%	100.0%
(20)	237990	Other Heavy and Civil Engineering Construction	55.9%	73.1%	85.7%	94.3%	97.7%	99.3%	99.8%	100.0%	100.0%
(21)	238	Specialty Trade Contractors	63.2%	80.3%	90.6%	97.0%	98.9%	99.8%	99.9%	100.0%	100.0%
(22)	2381	Foundation, Structure, and Building Exterior Contractors	62.1%	79.7%	90.1%	96.7%	98.9%	99.8%	100.0%	100.0%	100.0%
(23)	238110	Poured Concrete Foundation and Structure Contractors	58.3%	77.1%	88.8%	96.2%	98.5%	99.6%	99.9%	100.0%	100.0%
(24)	238120	Structural Steel and Precast Concrete Contractors	36.5%	55.7%	72.9%	88.7%	95.5%	99.3%	99.9%	100.0%	100.0%
(25)	238130	Framing Contractors	69.4%	87.1%	94.2%	97.8%	99.1%	99.9%	100.0%	100.0%	100.0%
(26)	238140	Masonry Contractors	65.3%	81.9%	90.9%	96.9%	99.0%	99.8%	100.0%	100.0%	100.0%
(27)	238150	Glass and Glazing Contractors	48.2%	71.2%	87.0%	96.5%	98.9%	99.8%	100.0%	100.0%	100.0%
(28)	238160	Roofing Contractors	59.0%	76.1%	87.9%	96.4%	99.0%	99.9%	100.0%	100.0%	100.0%
(29)	238170	Siding Contractors	76.0%	90.1%	96.4%	99.2%	99.8%	99.9%	100.0%	100.0%	100.0%
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	63.3%	80.1%	91.5%	97.2%	99.2%	99.8%	99.9%	100.0%	100.0%
(31)	2382	Building Equipment Contractors	57.8%	76.8%	88.7%	96.3%	98.6%	99.7%	99.9%	100.0%	100.0%
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	58.9%	77.5%	88.9%	96.3%	98.5%	99.7%	99.9%	100.0%	100.0%
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	58.0%	77.2%	89.2%	96.6%	98.8%	99.7%	99.9%	100.0%	100.0%
(34)	238290	Other Building Equipment Contractors	44.1%	62.4%	77.2%	91.2%	96.3%	99.3%	99.8%	99.9%	100.0%
(35)	2383	Building Finishing Contractors	70.4%	84.9%	93.1%	97.9%	99.3%	99.9%	100.0%	100.0%	100.0%
(36)	238310	Drywall and Insulation Contractors	57.4%	73.4%	85.2%	94.2%	97.6%	99.4%	99.9%	100.0%	100.0%
(37)	238320	Painting and Wall Covering Contractors	73.2%	87.7%	94.9%	98.7%	99.6%	99.9%	100.0%	100.0%	100.0%
(38)	238330	Flooring Contractors	75.4%	88.6%	95.2%	98.9%	99.7%	100.0%	100.0%	100.0%	100.0%
(39)	238340	Tile and Terrazzo Contractors	71.4%	85.2%	93.6%	98.3%	99.6%	99.9%	100.0%	100.0%	100.0%
(40)	238350	Finish Carpentry Contractors	75.6%	89.4%	96.1%	99.2%	99.8%	100.0%	100.0%	100.0%	100.0%
(41)	238390	Other Building Finishing Contractors	57.4%	75.6%	88.5%	96.7%	99.0%	99.8%	99.9%	100.0%	100.0%
(42)	2389	Other Specialty Trade Contractors	65.9%	82.0%	91.7%	97.6%	99.2%	99.9%	100.0%	100.0%	100.0%
(43)	238910	Site Preparation Contractors	63.8%	80.2%	90.4%	97.1%	99.0%	99.8%	100.0%	100.0%	100.0%
(44)	238990	All Other Specialty Trade Contractors	68.3%	84.2%	93.4%	98.3%	99.5%	99.9%	100.0%	100.0%	100.0%
(45)	23	All Construction Firms	65.1%	81.4%	91.0%	97.1%	98.9%	99.7%	99.9%	100.0%	100.0%

Appendix Table E.4
Construction Firms, Nationwide,
by Number of Employees,
Average Firm Revenue,
County Business Patterns 2008

	(a)	(b)	(c)	(d) (e) (f) (g) (h) (i) (j) (k) (l)								
				Average Firm Revenue by Number of Employees								
	NAICS Code	Industry Sector	All Firms	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000 +
(1)	236	Construction of Buildings	\$336,465	\$57,573	\$240,909	\$594,800	\$1,561,082	\$4,030,841	\$9,380,665	\$21,270,157	\$46,247,314	\$117,142,500
(2)	2361	Residential Building Construction	\$180,471	\$51,021	\$214,737	\$512,115	\$1,351,228	\$3,727,901	\$8,687,629	\$17,171,275	\$48,478,909	
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	\$154,256	\$55,287	\$209,797	\$497,530	\$1,230,232	\$3,124,463	\$7,550,863	\$18,630,316	\$39,213,000	
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	\$734,297	\$70,744	\$272,002	\$661,492	\$1,783,638	\$4,137,038	\$9,623,429	\$23,279,308		
(5)	236117	New Housing Operative Builders	\$402,617	\$64,951	\$244,452	\$586,579	\$1,676,272	\$4,464,246	\$10,343,362	\$16,194,556	\$54,158,333	
(6)	236118	Residential Remodelers	\$117,971	\$44,140	\$205,584	\$480,568	\$1,176,321	\$3,039,443	\$5,134,481	\$9,095,800		
(7)	2362	Nonresidential Building Construction	\$981,442	\$103,939	\$313,608	\$708,074	\$1,722,948	\$4,217,057	\$9,721,588	\$22,904,971	\$45,480,203	\$115,011,654
(8)	236210	Industrial Building Construction	\$1,232,008	\$92,089	\$298,219	\$671,848	\$1,598,339	\$4,006,103	\$9,000,156	\$19,208,500	\$46,451,813	\$79,778,667
(9)	236220	Commercial and Institutional Building Construction	\$959,997	\$104,982	\$314,966	\$710,944	\$1,731,909	\$4,232,763	\$9,812,397	\$23,680,455	\$45,156,333	\$125,581,550
(10)	237	Heavy and Civil Engineering Construction	\$1,198,189	\$98,826	\$325,420	\$731,896	\$1,734,367	\$3,975,117	\$9,041,059	\$21,180,593	\$44,999,806	\$142,413,092
(11)	2371	Utility System Construction	\$1,488,849	\$98,888	\$288,399	\$660,852	\$1,608,242	\$3,784,020	\$9,147,716	\$21,639,910	\$51,081,686	\$162,490,184
(12)	237110	Water and Sewer Line and Related Structures Construction	\$748,265	\$88,129	\$278,225	\$651,564	\$1,575,513	\$3,651,092	\$8,348,060	\$19,052,717	\$42,848,667	
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	\$5,308,865	\$211,221	\$371,944	\$854,060	\$1,872,797	\$4,336,938	\$10,753,964	\$23,974,000	\$58,980,696	\$148,442,692
(14)	237130	Power and Communication Line and Related Structures Construction	\$1,906,558	\$98,962	\$294,071	\$622,309	\$1,561,736	\$3,644,073	\$8,612,596	\$21,273,235	\$45,069,000	\$182,638,524
(15)	2372	Land Subdivision	\$311,562	\$75,757	\$302,850	\$706,853	\$1,735,272	\$3,832,787	\$7,369,400	\$16,542,833		\$69,453,000
(16)	237210	Land Subdivision	\$311,562	\$75,757	\$302,850	\$706,853	\$1,735,272	\$3,832,787	\$7,369,400	\$16,542,833		\$69,453,000
(17)	2373	Highway, Street, and Bridge Construction	\$1,661,571	\$148,332	\$432,407	\$875,270	\$1,949,456	\$4,181,509	\$9,031,031	\$20,503,818	\$35,546,063	\$84,751,667
(18)	237310	Highway, Street, and Bridge Construction	\$1,661,571	\$148,332	\$432,407	\$875,270	\$1,949,456	\$4,181,509	\$9,031,031	\$20,503,818	\$35,546,063	\$84,751,667
(19)	2379	Other Heavy and Civil Engineering Construction	\$813,415	\$83,911	\$298,762	\$711,126	\$1,615,805	\$4,282,147	\$9,426,974	\$23,159,174	\$45,022,500	
(20)	237990	Other Heavy and Civil Engineering Construction	\$813,415	\$83,911	\$298,762	\$711,126	\$1,615,805	\$4,282,147	\$9,426,974	\$23,159,174	\$45,022,500	
(21)	238	Specialty Trade Contractors	\$400,162	\$58,123	\$225,757	\$534,321	\$1,363,127	\$3,299,598	\$7,364,032	\$17,964,696	\$35,652,616	\$78,777,627
(22)	2381	Foundation, Structure, and Building Exterior Contractors	\$373,420	\$58,554	\$202,365	\$487,280	\$1,225,744	\$2,911,648	\$6,306,470	\$15,677,253	\$32,852,853	\$71,418,176
(23)	238110	Poured Concrete Foundation and Structure Contractors	\$468,674	\$70,175	\$205,730	\$476,403	\$1,166,416	\$2,868,901	\$6,691,958	\$17,191,236	\$33,418,150	\$71,399,273
(24)	238120	Structural Steel and Precast Concrete Contractors	\$1,104,738	\$100,217	\$258,586	\$590,833	\$1,444,621	\$3,338,792	\$7,187,957	\$22,486,381	\$43,165,000	
(25)	238130	Framing Contractors	\$214,118	\$50,919	\$167,890	\$396,851	\$1,048,665	\$2,463,990	\$4,588,139	\$11,437,750	\$12,677,000	
(26)	238140	Masonry Contractors	\$309,406	\$54,244	\$191,978	\$457,913	\$1,159,541	\$2,687,875	\$5,703,286	\$13,448,872		
(27)	238150	Glass and Glazing Contractors	\$525,599	\$69,513	\$245,114	\$615,848	\$1,491,017	\$3,565,550	\$8,552,537	\$17,869,444		
(28)	238160	Roofing Contractors	\$380,830	\$58,166	\$210,573	\$491,417	\$1,242,966	\$2,913,287	\$6,055,601	\$11,086,133		
(29)	238170	Siding Contractors	\$162,288	\$45,913	\$184,748	\$451,186	\$1,092,913	\$2,608,630	\$5,438,750			
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	\$369,339	\$56,739	\$227,145	\$534,705	\$1,357,908	\$3,344,826	\$7,229,861	\$15,933,286		
(31)	2382	Building Equipment Contractors	\$535,330	\$64,232	\$246,862	\$583,769	\$1,500,009	\$3,710,021	\$8,282,906	\$19,780,326	\$40,321,538	\$89,520,821
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	\$534,586	\$63,931	\$249,693	\$584,457	\$1,486,088	\$3,607,686	\$8,161,795	\$19,663,464	\$40,564,446	\$98,465,933
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	\$489,857	\$62,955	\$240,001	\$569,918	\$1,466,914	\$3,677,613	\$8,079,472	\$19,948,597	\$41,764,125	\$81,806,647
(34)	238290	Other Building Equipment Contractors	\$1,195,908	\$92,825	\$317,852	\$739,329	\$1,832,206	\$4,422,617	\$9,680,806	\$19,431,000	\$26,149,333	\$89,087,143
(35)	2383	Building Finishing Contractors	\$262,293	\$47,470	\$202,183	\$466,159	\$1,198,252	\$2,857,096	\$6,562,895	\$16,291,980	\$23,350,867	\$58,462,000
(36)	238310	Drywall and Insulation Contractors	\$562,401	\$55,383	\$203,581	\$457,700	\$1,179,012	\$2,868,893	\$6,836,125	\$17,350,653	\$26,757,950	\$74,895,667
(37)	238320	Painting and Wall Covering Contractors	\$194,370	\$46,495	\$191,418	\$435,656	\$1,171,426	\$2,617,312	\$6,134,008	\$14,358,150	\$19,913,200	
(38)	238330	Flooring Contractors	\$187,494	\$43,930	\$208,282	\$524,680	\$1,245,701	\$3,227,190	\$6,420,930	\$15,014,750		
(39)	238340	Tile and Terrazzo Contractors	\$217,307	\$43,341	\$195,020	\$455,708	\$1,218,073	\$2,844,423	\$5,446,025	\$14,001,143		
(40)	238350	Finish Carpentry Contractors	\$167,923	\$45,707	\$208,602	\$474,686	\$1,212,653	\$2,877,089	\$6,289,848	\$12,889,667		
(41)	238390	Other Building Finishing Contractors	\$401,947	\$59,940	\$222,158	\$505,068	\$1,239,421	\$3,042,897	\$6,947,679	\$14,918,333	\$5,757,000	
(42)	2389	Other Specialty Trade Contractors	\$338,362	\$63,541	\$237,305	\$554,898	\$1,377,274	\$3,229,191	\$6,883,834	\$16,754,215	\$29,562,133	\$44,381,600
(43)	238910	Site Preparation Contractors	\$388,258	\$62,700	\$243,823	\$574,744	\$1,422,357	\$3,266,953	\$7,013,570	\$17,605,018	\$31,343,727	
(44)	238990	All Other Specialty Trade Contractors	\$278,584	\$64,482	\$229,297	\$528,406	\$1,303,374	\$3,156,707	\$6,577,834	\$14,804,458	\$24,662,750	\$53,764,750
(45)	23	All Construction Firms	\$430,554	\$59,928	\$236,369	\$565,238	\$1,445,857	\$3,534,315	\$8,033,473	\$19,251,373	\$40,375,249	\$111,414,981

Appendix Table E.5
Construction Firms, Nationwide, Excluding Sole Proprietorships,
by Number of Employees,
County Business Patterns 2008

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
					Firm Counts by Number of Employees					
	NAICS Code	Industry Sector	Total Firms		1-4		5-9		10-19	
			N	%	N	%	N	%	N	%
(1)	236	Construction of Buildings	191,073	100.0%	131,096	68.6%	29,860	15.6%	16,373	8.6%
(2)	2361	Residential Building Construction	149,885	100.0%	113,314	75.6%	21,659	14.5%	9,335	6.2%
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	55,436	100.0%	41,580	75.0%	8,673	15.6%	3,565	6.4%
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	3,527	100.0%	2,052	58.2%	573	16.2%	421	11.9%
(5)	236117	New Housing Operative Builders	21,657	100.0%	15,098	69.7%	3,459	16.0%	1,552	7.2%
(6)	236118	Residential Remodelers	69,265	100.0%	54,584	78.8%	8,954	12.9%	3,797	5.5%
(7)	2362	Nonresidential Building Construction	41,188	100.0%	17,782	43.2%	8,201	19.9%	7,038	17.1%
(8)	236210	Industrial Building Construction	3,172	100.0%	1,401	44.2%	644	20.3%	509	16.0%
(9)	236220	Commercial and Institutional Building Construction	38,016	100.0%	16,381	43.1%	7,557	19.9%	6,529	17.2%
(10)	237	Heavy and Civil Engineering Construction	42,852	100.0%	20,623	48.1%	7,610	17.8%	6,010	14.0%
(11)	2371	Utility System Construction	18,170	100.0%	7,185	39.5%	3,674	20.2%	3,021	16.6%
(12)	237110	Water and Sewer Line and Related Structures Construction	11,358	100.0%	4,730	41.6%	2,524	22.2%	1,903	16.8%
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	1,779	100.0%	502	28.2%	236	13.3%	271	15.2%
(14)	237130	Power and Communication Line and Related Structures Construction	5,033	100.0%	1,953	38.8%	914	18.2%	847	16.8%
(15)	2372	Land Subdivision	10,121	100.0%	7,570	74.8%	1,390	13.7%	681	6.7%
(16)	237210	Land Subdivision	10,121	100.0%	7,570	74.8%	1,390	13.7%	681	6.7%
(17)	2373	Highway, Street, and Bridge Construction	10,449	100.0%	3,758	36.0%	1,789	17.1%	1,733	16.6%
(18)	237310	Highway, Street, and Bridge Construction	10,449	100.0%	3,758	36.0%	1,789	17.1%	1,733	16.6%
(19)	2379	Other Heavy and Civil Engineering Construction	4,112	100.0%	2,110	51.3%	757	18.4%	575	14.0%
(20)	237990	Other Heavy and Civil Engineering Construction	4,112	100.0%	2,110	51.3%	757	18.4%	575	14.0%
(21)	238	Specialty Trade Contractors	389,407	100.0%	224,785	57.7%	72,215	18.5%	47,064	12.1%
(22)	2381	Foundation, Structure, and Building Exterior Contractors	82,023	100.0%	45,960	56.0%	15,515	18.9%	10,168	12.4%
(23)	238110	Poured Concrete Foundation and Structure Contractors	18,855	100.0%	9,825	52.1%	3,771	20.0%	2,591	13.7%
(24)	238120	Structural Steel and Precast Concrete Contractors	3,318	100.0%	1,092	32.9%	642	19.3%	589	17.8%
(25)	238130	Framing Contractors	11,101	100.0%	7,189	64.8%	2,127	19.2%	945	8.5%
(26)	238140	Masonry Contractors	17,667	100.0%	10,325	58.4%	3,183	18.0%	1,988	11.3%
(27)	238150	Glass and Glazing Contractors	4,767	100.0%	2,043	42.9%	1,161	24.4%	847	17.8%
(28)	238160	Roofing Contractors	14,723	100.0%	7,763	52.7%	2,701	18.3%	2,064	14.0%
(29)	238170	Siding Contractors	7,063	100.0%	5,058	71.6%	1,133	16.0%	549	7.8%
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	4,529	100.0%	2,665	58.8%	797	17.6%	595	13.1%
(31)	2382	Building Equipment Contractors	151,727	100.0%	79,142	52.2%	31,174	20.5%	20,836	13.7%
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	63,908	100.0%	34,004	53.2%	12,950	20.3%	8,461	13.2%
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	81,490	100.0%	42,542	52.2%	17,042	20.9%	11,381	14.0%
(34)	238290	Other Building Equipment Contractors	6,329	100.0%	2,596	41.0%	1,182	18.7%	994	15.7%
(35)	2383	Building Finishing Contractors	96,118	100.0%	63,340	65.9%	15,062	15.7%	9,326	9.7%
(36)	238310	Drywall and Insulation Contractors	16,924	100.0%	8,913	52.7%	2,732	16.1%	2,241	13.2%
(37)	238320	Painting and Wall Covering Contractors	27,358	100.0%	18,654	68.2%	4,370	16.0%	2,423	8.9%
(38)	238330	Flooring Contractors	12,142	100.0%	8,628	71.1%	1,801	14.8%	967	8.0%
(39)	238340	Tile and Terrazzo Contractors	8,705	100.0%	5,870	67.4%	1,281	14.7%	864	9.9%
(40)	238350	Finish Carpentry Contractors	25,119	100.0%	18,136	72.2%	3,763	15.0%	1,991	7.9%
(41)	238390	Other Building Finishing Contractors	5,870	100.0%	3,139	53.5%	1,115	19.0%	840	14.3%
(42)	2389	Other Specialty Trade Contractors	59,539	100.0%	36,343	61.0%	10,464	17.6%	6,734	11.3%
(43)	238910	Site Preparation Contractors	32,742	100.0%	19,216	58.7%	5,823	17.8%	3,884	11.9%
(44)	238990	All Other Specialty Trade Contractors	26,797	100.0%	17,127	63.9%	4,641	17.3%	2,850	10.6%
(45)	23	All Construction Firms	623,332	100.0%	376,504	60.4%	109,685	17.6%	69,447	11.1%

Appendix Table E.5
Construction Firms, Nationwide, Excluding Sole Proprietorships,
by Number of Employees,
County Business Patterns 2008

	(a)	(b)	(c)	(d)	(k)	(l)	(m)	(n)	(o)	(p)
					Firm Counts by Number of Employees					
			Total Firms		20-49		50-99		100-249	
	NAICS Code	Industry Sector	N	%	N	%	N	%	N	%
(1)	236	Construction of Buildings	191,073	100.0%	9,566	5.0%	2,647	1.4%	1,178	0.6%
(2)	2361	Residential Building Construction	149,885	100.0%	4,107	2.7%	990	0.7%	386	0.3%
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	55,436	100.0%	1,296	2.3%	227	0.4%	68	0.1%
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	3,527	100.0%	306	8.7%	102	2.9%	54	1.5%
(5)	236117	New Housing Operative Builders	21,657	100.0%	942	4.3%	385	1.8%	185	0.9%
(6)	236118	Residential Remodelers	69,265	100.0%	1,563	2.3%	276	0.4%	79	0.1%
(7)	2362	Nonresidential Building Construction	41,188	100.0%	5,459	13.3%	1,657	4.0%	792	1.9%
(8)	236210	Industrial Building Construction	3,172	100.0%	363	11.4%	114	3.6%	90	2.8%
(9)	236220	Commercial and Institutional Building Construction	38,016	100.0%	5,096	13.4%	1,543	4.1%	702	1.8%
(10)	237	Heavy and Civil Engineering Construction	42,852	100.0%	4,996	11.7%	1,972	4.6%	1,177	2.7%
(11)	2371	Utility System Construction	18,170	100.0%	2,526	13.9%	969	5.3%	545	3.0%
(12)	237110	Water and Sewer Line and Related Structures Construction	11,358	100.0%	1,446	12.7%	487	4.3%	216	1.9%
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	1,779	100.0%	314	17.7%	188	10.6%	163	9.2%
(14)	237130	Power and Communication Line and Related Structures Construction	5,033	100.0%	766	15.2%	294	5.8%	166	3.3%
(15)	2372	Land Subdivision	10,121	100.0%	313	3.1%	106	1.0%	49	0.5%
(16)	237210	Land Subdivision	10,121	100.0%	313	3.1%	106	1.0%	49	0.5%
(17)	2373	Highway, Street, and Bridge Construction	10,449	100.0%	1,754	16.8%	736	7.0%	506	4.8%
(18)	237310	Highway, Street, and Bridge Construction	10,449	100.0%	1,754	16.8%	736	7.0%	506	4.8%
(19)	2379	Other Heavy and Civil Engineering Construction	4,112	100.0%	403	9.8%	161	3.9%	77	1.9%
(20)	237990	Other Heavy and Civil Engineering Construction	4,112	100.0%	403	9.8%	161	3.9%	77	1.9%
(21)	238	Specialty Trade Contractors	389,407	100.0%	30,738	7.9%	9,330	2.4%	4,168	1.1%
(22)	2381	Foundation, Structure, and Building Exterior Contractors	82,023	100.0%	6,880	8.4%	2,279	2.8%	983	1.2%
(23)	238110	Poured Concrete Foundation and Structure Contractors	18,855	100.0%	1,749	9.3%	556	2.9%	262	1.4%
(24)	238120	Structural Steel and Precast Concrete Contractors	3,318	100.0%	579	17.5%	249	7.5%	141	4.2%
(25)	238130	Framing Contractors	11,101	100.0%	513	4.6%	186	1.7%	121	1.1%
(26)	238140	Masonry Contractors	17,667	100.0%	1,412	8.0%	513	2.9%	195	1.1%
(27)	238150	Glass and Glazing Contractors	4,767	100.0%	524	11.0%	129	2.7%	54	1.1%
(28)	238160	Roofing Contractors	14,723	100.0%	1,536	10.4%	480	3.3%	162	1.1%
(29)	238170	Siding Contractors	7,063	100.0%	254	3.6%	53	0.8%	12	0.2%
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	4,529	100.0%	313	6.9%	113	2.5%	36	0.8%
(31)	2382	Building Equipment Contractors	151,727	100.0%	13,792	9.1%	4,202	2.8%	1,999	1.3%
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	63,908	100.0%	5,605	8.8%	1,745	2.7%	877	1.4%
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	81,490	100.0%	7,228	8.9%	2,112	2.6%	916	1.1%
(34)	238290	Other Building Equipment Contractors	6,329	100.0%	959	15.2%	345	5.5%	206	3.3%
(35)	2383	Building Finishing Contractors	96,118	100.0%	5,827	6.1%	1,668	1.7%	707	0.7%
(36)	238310	Drywall and Insulation Contractors	16,924	100.0%	1,824	10.8%	715	4.2%	375	2.2%
(37)	238320	Painting and Wall Covering Contractors	27,358	100.0%	1,404	5.1%	350	1.3%	130	0.5%
(38)	238330	Flooring Contractors	12,142	100.0%	577	4.8%	124	1.0%	41	0.3%
(39)	238340	Tile and Terrazzo Contractors	8,705	100.0%	504	5.8%	139	1.6%	40	0.5%
(40)	238350	Finish Carpentry Contractors	25,119	100.0%	965	3.8%	187	0.7%	66	0.3%
(41)	238390	Other Building Finishing Contractors	5,870	100.0%	553	9.4%	153	2.6%	55	0.9%
(42)	2389	Other Specialty Trade Contractors	59,539	100.0%	4,239	7.1%	1,181	2.0%	479	0.8%
(43)	238910	Site Preparation Contractors	32,742	100.0%	2,637	8.1%	774	2.4%	341	1.0%
(44)	238990	All Other Specialty Trade Contractors	26,797	100.0%	1,602	6.0%	407	1.5%	138	0.5%
(45)	23	All Construction Firms	623,332	100.0%	45,300	7.3%	13,949	2.2%	6,523	1.0%

Appendix Table E.5
Construction Firms, Nationwide, Excluding Sole Proprietorships,
by Number of Employees,
County Business Patterns 2008

	(a)	(b)	(c)	(d)	(q)	(r)	(s)	(t)	(u)	(v)
					Firm Counts by Number of Employees					
	NAICS Code	Industry Sector	Total Firms		250-499		500-999		1,000 +	
			N	%	N	%	N	%	N	%
(1)	236	Construction of Buildings	191,073	100.0%	240	0.1%	83	0.0%	30	0.0%
(2)	2361	Residential Building Construction	149,885	100.0%	69	0.0%	21	0.0%	4	0.0%
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	55,436	100.0%	19	0.0%	8	0.0%	0	0.0%
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	3,527	100.0%	13	0.4%	5	0.1%	1	0.0%
(5)	236117	New Housing Operative Builders	21,657	100.0%	27	0.1%	6	0.0%	3	0.0%
(6)	236118	Residential Remodelers	69,265	100.0%	10	0.0%	2	0.0%	0	0.0%
(7)	2362	Nonresidential Building Construction	41,188	100.0%	171	0.4%	62	0.2%	26	0.1%
(8)	236210	Industrial Building Construction	3,172	100.0%	30	0.9%	15	0.5%	6	0.2%
(9)	236220	Commercial and Institutional Building Construction	38,016	100.0%	141	0.4%	47	0.1%	20	0.1%
(10)	237	Heavy and Civil Engineering Construction	42,852	100.0%	313	0.7%	88	0.2%	63	0.1%
(11)	2371	Utility System Construction	18,170	100.0%	154	0.8%	48	0.3%	48	0.3%
(12)	237110	Water and Sewer Line and Related Structures Construction	11,358	100.0%	44	0.4%	6	0.1%	2	0.0%
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	1,779	100.0%	59	3.3%	21	1.2%	25	1.4%
(14)	237130	Power and Communication Line and Related Structures Construction	5,033	100.0%	51	1.0%	21	0.4%	21	0.4%
(15)	2372	Land Subdivision	10,121	100.0%	6	0.1%	2	0.0%	4	0.0%
(16)	237210	Land Subdivision	10,121	100.0%	6	0.1%	2	0.0%	4	0.0%
(17)	2373	Highway, Street, and Bridge Construction	10,449	100.0%	131	1.3%	31	0.3%	11	0.1%
(18)	237310	Highway, Street, and Bridge Construction	10,449	100.0%	131	1.3%	31	0.3%	11	0.1%
(19)	2379	Other Heavy and Civil Engineering Construction	4,112	100.0%	22	0.5%	7	0.2%	0	0.0%
(20)	237990	Other Heavy and Civil Engineering Construction	4,112	100.0%	22	0.5%	7	0.2%	0	0.0%
(21)	238	Specialty Trade Contractors	389,407	100.0%	847	0.2%	195	0.1%	65	0.0%
(22)	2381	Foundation, Structure, and Building Exterior Contractors	82,023	100.0%	188	0.2%	33	0.0%	17	0.0%
(23)	238110	Poured Concrete Foundation and Structure Contractors	18,855	100.0%	70	0.4%	20	0.1%	11	0.1%
(24)	238120	Structural Steel and Precast Concrete Contractors	3,318	100.0%	21	0.6%	4	0.1%	1	0.0%
(25)	238130	Framing Contractors	11,101	100.0%	16	0.1%	3	0.0%	1	0.0%
(26)	238140	Masonry Contractors	17,667	100.0%	47	0.3%	3	0.0%	1	0.0%
(27)	238150	Glass and Glazing Contractors	4,767	100.0%	9	0.2%	0	0.0%	0	0.0%
(28)	238160	Roofing Contractors	14,723	100.0%	15	0.1%	1	0.0%	1	0.0%
(29)	238170	Siding Contractors	7,063	100.0%	3	0.0%	0	0.0%	1	0.0%
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	4,529	100.0%	7	0.2%	2	0.0%	1	0.0%
(31)	2382	Building Equipment Contractors	151,727	100.0%	428	0.3%	117	0.1%	37	0.0%
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	63,908	100.0%	188	0.3%	65	0.1%	13	0.0%
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	81,490	100.0%	206	0.3%	46	0.1%	17	0.0%
(34)	238290	Other Building Equipment Contractors	6,329	100.0%	34	0.5%	6	0.1%	7	0.1%
(35)	2383	Building Finishing Contractors	96,118	100.0%	152	0.2%	30	0.0%	6	0.0%
(36)	238310	Drywall and Insulation Contractors	16,924	100.0%	101	0.6%	20	0.1%	3	0.0%
(37)	238320	Painting and Wall Covering Contractors	27,358	100.0%	20	0.1%	5	0.0%	2	0.0%
(38)	238330	Flooring Contractors	12,142	100.0%	4	0.0%	0	0.0%	0	0.0%
(39)	238340	Tile and Terrazzo Contractors	8,705	100.0%	7	0.1%	0	0.0%	0	0.0%
(40)	238350	Finish Carpentry Contractors	25,119	100.0%	9	0.0%	2	0.0%	0	0.0%
(41)	238390	Other Building Finishing Contractors	5,870	100.0%	11	0.2%	3	0.1%	1	0.0%
(42)	2389	Other Specialty Trade Contractors	59,539	100.0%	79	0.1%	15	0.0%	5	0.0%
(43)	238910	Site Preparation Contractors	32,742	100.0%	55	0.2%	11	0.0%	1	0.0%
(44)	238990	All Other Specialty Trade Contractors	26,797	100.0%	24	0.1%	4	0.0%	4	0.0%
(45)	23	All Construction Firms	623,332	100.0%	1,400	0.2%	366	0.1%	158	0.0%

Appendix Table E.6
Construction Firms, Nationwide, Excluding Sole Proprietorships,
by Number of Employees,
Cumulative Percentage,
County Business Patterns 2008

(a)	(b)	(c) (d) (e) (f) (g) (h) (i) (j) (k)								
		Cumulative % of Firms by Number of Employees								
NAICS Code	Industry Sector	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000 +
(1) 236	Construction of Buildings	68.6%	84.2%	92.8%	97.8%	99.2%	99.8%	99.9%	100.0%	100.0%
(2) 2361	Residential Building Construction	75.6%	90.1%	96.3%	99.0%	99.7%	99.9%	100.0%	100.0%	100.0%
(3) 236115	New Single-Family Housing Construction (except Operative Builders)	75.0%	90.7%	97.1%	99.4%	99.8%	100.0%	100.0%	100.0%	100.0%
(4) 236116	New Multifamily Housing Construction (except Operative Builders)	58.2%	74.4%	86.4%	95.0%	97.9%	99.5%	99.8%	100.0%	100.0%
(5) 236117	New Housing Operative Builders	69.7%	85.7%	92.9%	97.2%	99.0%	99.8%	100.0%	100.0%	100.0%
(6) 236118	Residential Remodelers	78.8%	91.7%	97.2%	99.5%	99.9%	100.0%	100.0%	100.0%	100.0%
(7) 2362	Nonresidential Building Construction	43.2%	63.1%	80.2%	93.4%	97.4%	99.4%	99.8%	99.9%	100.0%
(8) 236210	Industrial Building Construction	44.2%	64.5%	80.5%	92.0%	95.6%	98.4%	99.3%	99.8%	100.0%
(9) 236220	Commercial and Institutional Building Construction	43.1%	63.0%	80.1%	93.5%	97.6%	99.5%	99.8%	99.9%	100.0%
(10) 237	Heavy and Civil Engineering Construction	48.1%	65.9%	79.9%	91.6%	96.2%	98.9%	99.6%	99.9%	100.0%
(11) 2371	Utility System Construction	39.5%	59.8%	76.4%	90.3%	95.6%	98.6%	99.5%	99.7%	100.0%
(12) 237110	Water and Sewer Line and Related Structures Construction	41.6%	63.9%	80.6%	93.4%	97.6%	99.5%	99.9%	100.0%	100.0%
(13) 237120	Oil and Gas Pipeline and Related Structures Construction	28.2%	41.5%	56.7%	74.4%	84.9%	94.1%	97.4%	98.6%	100.0%
(14) 237130	Power and Communication Line and Related Structures Construction	38.8%	57.0%	73.8%	89.0%	94.9%	98.2%	99.2%	99.6%	100.0%
(15) 2372	Land Subdivision	74.8%	88.5%	95.3%	98.3%	99.4%	99.9%	99.9%	100.0%	100.0%
(16) 237210	Land Subdivision	74.8%	88.5%	95.3%	98.3%	99.4%	99.9%	99.9%	100.0%	100.0%
(17) 2373	Highway, Street, and Bridge Construction	36.0%	53.1%	69.7%	86.5%	93.5%	98.3%	99.6%	99.9%	100.0%
(18) 237310	Highway, Street, and Bridge Construction	36.0%	53.1%	69.7%	86.5%	93.5%	98.3%	99.6%	99.9%	100.0%
(19) 2379	Other Heavy and Civil Engineering Construction	51.3%	69.7%	83.7%	93.5%	97.4%	99.3%	99.8%	100.0%	100.0%
(20) 237990	Other Heavy and Civil Engineering Construction	51.3%	69.7%	83.7%	93.5%	97.4%	99.3%	99.8%	100.0%	100.0%
(21) 238	Specialty Trade Contractors	57.7%	76.3%	88.4%	96.2%	98.6%	99.7%	99.9%	100.0%	100.0%
(22) 2381	Foundation, Structure, and Building Exterior Contractors	56.0%	74.9%	87.3%	95.7%	98.5%	99.7%	99.9%	100.0%	100.0%
(23) 238110	Poured Concrete Foundation and Structure Contractors	52.1%	72.1%	85.8%	95.1%	98.1%	99.5%	99.8%	99.9%	100.0%
(24) 238120	Structural Steel and Precast Concrete Contractors	32.9%	52.3%	70.0%	87.5%	95.0%	99.2%	99.8%	100.0%	100.0%
(25) 238130	Framing Contractors	64.8%	83.9%	92.4%	97.1%	98.7%	99.8%	100.0%	100.0%	100.0%
(26) 238140	Masonry Contractors	58.4%	76.5%	87.7%	95.7%	98.6%	99.7%	100.0%	100.0%	100.0%
(27) 238150	Glass and Glazing Contractors	42.9%	67.2%	85.0%	96.0%	98.7%	99.8%	100.0%	100.0%	100.0%
(28) 238160	Roofing Contractors	52.7%	71.1%	85.1%	95.5%	98.8%	99.9%	100.0%	100.0%	100.0%
(29) 238170	Siding Contractors	71.6%	87.7%	95.4%	99.0%	99.8%	99.9%	100.0%	100.0%	100.0%
(30) 238190	Other Foundation, Structure, and Building Exterior Contractors	58.8%	76.4%	89.6%	96.5%	99.0%	99.8%	99.9%	100.0%	100.0%
(31) 2382	Building Equipment Contractors	52.2%	72.7%	86.4%	95.5%	98.3%	99.6%	99.9%	100.0%	100.0%
(32) 238210	Electrical Contractors and Other Wiring Installation Contractors	53.2%	73.5%	86.7%	95.5%	98.2%	99.6%	99.9%	100.0%	100.0%
(33) 238220	Plumbing, Heating, and Air-Conditioning Contractors	52.2%	73.1%	87.1%	96.0%	98.5%	99.7%	99.9%	100.0%	100.0%
(34) 238290	Other Building Equipment Contractors	41.0%	59.7%	75.4%	90.6%	96.0%	99.3%	99.8%	99.9%	100.0%
(35) 2383	Building Finishing Contractors	65.9%	81.6%	91.3%	97.3%	99.1%	99.8%	100.0%	100.0%	100.0%
(36) 238310	Drywall and Insulation Contractors	52.7%	68.8%	82.0%	92.8%	97.1%	99.3%	99.9%	100.0%	100.0%
(37) 238320	Painting and Wall Covering Contractors	68.2%	84.2%	93.0%	98.1%	99.4%	99.9%	100.0%	100.0%	100.0%
(38) 238330	Flooring Contractors	71.1%	85.9%	93.9%	98.6%	99.6%	100.0%	100.0%	100.0%	100.0%
(39) 238340	Tile and Terrazzo Contractors	67.4%	82.1%	92.1%	97.9%	99.5%	99.9%	100.0%	100.0%	100.0%
(40) 238350	Finish Carpentry Contractors	72.2%	87.2%	95.1%	98.9%	99.7%	100.0%	100.0%	100.0%	100.0%
(41) 238390	Other Building Finishing Contractors	53.5%	72.5%	86.8%	96.2%	98.8%	99.7%	99.9%	100.0%	100.0%
(42) 2389	Other Specialty Trade Contractors	61.0%	78.6%	89.9%	97.0%	99.0%	99.8%	100.0%	100.0%	100.0%
(43) 238910	Site Preparation Contractors	58.7%	76.5%	88.3%	96.4%	98.8%	99.8%	100.0%	100.0%	100.0%
(44) 238990	All Other Specialty Trade Contractors	63.9%	81.2%	91.9%	97.8%	99.4%	99.9%	100.0%	100.0%	100.0%
(45) 23	All Construction Firms	60.4%	78.0%	89.1%	96.4%	98.6%	99.7%	99.9%	100.0%	100.0%

Appendix Table E.7
Construction Firms, Nationwide,
Excluding Sole Proprietorships,
by Number of Employees,
Average Firm Revenue,
County Business Patterns 2008

	(a)	(b)	(c)	(d) (e) (f) (g) (h) (i) (j) (k) (l)								
				Average Firm Revenue by Number of Employees								
	NAICS Code	Industry Sector	All Firms	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000 +
(1)	236	Construction of Buildings	\$394,066	\$63,649	\$253,679	\$611,311	\$1,581,625	\$4,058,651	\$9,390,859	\$21,296,079	\$45,862,048	\$117,142,500
(2)	2361	Residential Building Construction	\$211,101	\$55,962	\$226,014	\$528,298	\$1,377,026	\$3,768,515	\$8,729,104	\$17,171,275	\$42,058,429	
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	\$177,334	\$60,302	\$222,575	\$517,348	\$1,259,873	\$3,184,048	\$7,666,618	\$15,972,053	\$39,213,000	
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	\$805,715	\$76,217	\$282,272	\$678,316	\$1,802,752	\$4,156,157	\$9,797,241	\$16,087,077		
(5)	236117	New Housing Operative Builders	\$426,692	\$67,728	\$249,454	\$593,695	\$1,686,357	\$4,490,119	\$10,342,859	\$12,045,481	\$54,158,333	
(6)	236118	Residential Remodelers	\$140,439	\$48,623	\$216,688	\$495,216	\$1,203,946	\$3,012,652	\$5,134,481	\$8,537,400		
(7)	2362	Nonresidential Building Construction	\$1,059,885	\$112,630	\$326,744	\$720,953	\$1,734,522	\$4,231,997	\$9,713,381	\$22,960,474	\$45,135,984	\$115,011,654
(8)	236210	Industrial Building Construction	\$1,352,312	\$101,215	\$314,797	\$688,291	\$1,622,669	\$4,007,325	\$9,000,156	\$16,344,167	\$45,590,533	\$79,778,667
(9)	236220	Commercial and Institutional Building Construction	\$1,035,481	\$113,598	\$327,762	\$723,499	\$1,742,490	\$4,248,596	\$9,804,821	\$23,758,766	\$44,990,915	\$125,581,550
(10)	237	Heavy and Civil Engineering Construction	\$1,310,206	\$108,285	\$338,466	\$743,682	\$1,756,764	\$3,987,104	\$9,038,854	\$21,107,329	\$44,331,023	\$144,028,524
(11)	2371	Utility System Construction	\$1,666,975	\$113,135	\$299,611	\$672,784	\$1,634,155	\$3,796,131	\$9,122,877	\$21,632,455	\$50,020,125	\$163,169,792
(12)	237110	Water and Sewer Line and Related Structures Construction	\$855,037	\$102,690	\$290,132	\$659,533	\$1,586,327	\$3,658,940	\$8,353,556	\$18,909,023	\$30,927,833	
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	\$5,592,478	\$240,616	\$392,606	\$866,395	\$1,908,242	\$4,368,894	\$10,727,337	\$23,974,000	\$56,551,381	\$149,185,640
(14)	237130	Power and Communication Line and Related Structures Construction	\$2,111,743	\$105,523	\$301,577	\$637,563	\$1,612,086	\$3,657,126	\$8,548,458	\$21,273,235	\$45,537,857	\$158,634,333
(15)	2372	Land Subdivision	\$324,682	\$77,523	\$310,756	\$714,016	\$1,753,185	\$3,795,972	\$7,424,633	\$10,109,333		\$47,681,750
(16)	237210	Land Subdivision	\$324,682	\$77,523	\$310,756	\$714,016	\$1,753,185	\$3,795,972	\$7,424,633	\$10,109,333		\$47,681,750
(17)	2373	Highway, Street, and Bridge Construction	\$1,804,552	\$168,195	\$451,985	\$891,860	\$1,963,365	\$4,194,761	\$9,045,611	\$18,692,290	\$34,677,419	\$87,621,364
(18)	237310	Highway, Street, and Bridge Construction	\$1,804,552	\$168,195	\$451,985	\$891,860	\$1,963,365	\$4,194,761	\$9,045,611	\$18,692,290	\$34,677,419	\$87,621,364
(19)	2379	Other Heavy and Civil Engineering Construction	\$903,243	\$95,435	\$308,668	\$701,892	\$1,625,615	\$4,313,056	\$9,426,974	\$17,860,773	\$30,338,000	
(20)	237990	Other Heavy and Civil Engineering Construction	\$903,243	\$95,435	\$308,668	\$701,892	\$1,625,615	\$4,313,056	\$9,426,974	\$17,860,773	\$30,338,000	
(21)	238	Specialty Trade Contractors	\$486,574	\$65,872	\$239,017	\$550,806	\$1,381,101	\$3,318,707	\$7,391,866	\$17,948,506	\$35,739,677	\$78,051,277
(22)	2381	Foundation, Structure, and Building Exterior Contractors	\$469,329	\$68,470	\$219,423	\$507,968	\$1,247,878	\$2,942,430	\$6,343,810	\$15,639,883	\$30,548,727	\$71,418,176
(23)	238110	Poured Concrete Foundation and Structure Contractors	\$585,852	\$82,705	\$223,173	\$494,991	\$1,186,109	\$2,901,065	\$6,718,374	\$15,112,071	\$32,420,950	\$63,850,091
(24)	238120	Structural Steel and Precast Concrete Contractors	\$1,223,837	\$113,253	\$271,282	\$608,431	\$1,460,976	\$3,352,177	\$7,187,957	\$22,486,381		
(25)	238130	Framing Contractors	\$272,278	\$57,725	\$181,150	\$424,220	\$1,069,606	\$2,535,973	\$4,604,364	\$7,239,563	\$12,677,000	
(26)	238140	Masonry Contractors	\$411,147	\$65,726	\$213,859	\$484,524	\$1,191,767	\$2,731,924	\$5,800,436	\$13,268,681		
(27)	238150	Glass and Glazing Contractors	\$596,872	\$78,632	\$251,848	\$621,089	\$1,490,987	\$3,538,395	\$8,143,500	\$13,293,111		
(28)	238160	Roofing Contractors	\$464,527	\$67,248	\$228,890	\$506,287	\$1,262,509	\$2,918,179	\$6,090,488	\$11,086,133		
(29)	238170	Siding Contractors	\$199,783	\$52,750	\$196,056	\$470,616	\$1,118,614	\$2,563,377	\$4,899,083			
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	\$443,452	\$62,599	\$238,178	\$554,440	\$1,370,256	\$3,373,752	\$7,229,861	\$15,933,286		
(31)	2382	Building Equipment Contractors	\$629,855	\$71,700	\$256,088	\$594,228	\$1,509,576	\$3,716,723	\$8,307,713	\$19,774,797	\$40,388,120	\$76,521,568
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	\$630,095	\$71,458	\$258,524	\$594,681	\$1,498,879	\$3,606,343	\$8,163,741	\$19,629,160	\$40,564,446	\$97,863,154
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	\$578,795	\$70,554	\$249,328	\$580,216	\$1,474,009	\$3,688,449	\$8,116,326	\$19,948,597	\$41,673,304	\$68,915,824
(34)	238290	Other Building Equipment Contractors	\$1,284,827	\$93,585	\$326,868	\$750,162	\$1,840,165	\$4,448,101	\$9,771,660	\$17,162,853		\$49,081,429
(35)	2383	Building Finishing Contractors	\$325,029	\$52,862	\$216,089	\$485,078	\$1,221,869	\$2,887,719	\$6,576,962	\$16,282,178	\$23,350,867	\$32,038,667
(36)	238310	Drywall and Insulation Contractors	\$684,975	\$62,775	\$220,218	\$482,221	\$1,207,564	\$2,896,965	\$6,837,789	\$16,232,535	\$24,725,700	
(37)	238320	Painting and Wall Covering Contractors	\$250,966	\$52,716	\$207,667	\$456,368	\$1,199,395	\$2,653,731	\$6,134,008	\$14,358,150	\$14,991,600	
(38)	238330	Flooring Contractors	\$231,621	\$48,721	\$220,767	\$545,715	\$1,259,490	\$3,265,952	\$6,687,610	\$10,014,250		
(39)	238340	Tile and Terrazzo Contractors	\$263,265	\$47,708	\$207,339	\$469,054	\$1,238,738	\$2,882,324	\$5,221,550			
(40)	238350	Finish Carpentry Contractors	\$199,236	\$49,634	\$218,968	\$486,706	\$1,229,046	\$2,907,316	\$6,289,848	\$12,889,667		
(41)	238390	Other Building Finishing Contractors	\$455,500	\$65,092	\$230,650	\$517,502	\$1,258,960	\$3,054,183	\$6,930,127	\$12,917,182	\$5,757,000	
(42)	2389	Other Specialty Trade Contractors	\$405,807	\$72,570	\$250,163	\$572,162	\$1,397,183	\$3,237,387	\$6,923,390	\$16,754,215	\$27,084,333	\$33,102,000
(43)	238910	Site Preparation Contractors	\$463,475	\$70,848	\$253,822	\$588,056	\$1,437,473	\$3,286,331	\$7,023,399	\$17,605,018	\$27,964,909	\$0
(44)	238990	All Other Specialty Trade Contractors	\$335,345	\$74,501	\$245,412	\$550,074	\$1,330,861	\$3,144,310	\$6,676,268	\$9,302,625	\$0	\$41,377,500
(45)	23	All Construction Firms	\$514,839	\$67,421	\$249,909	\$581,762	\$1,464,876	\$3,554,373	\$8,050,048	\$19,228,599	\$40,100,866	\$111,781,044

Appendix Table E.8
Construction Firms, Nationwide,
by Number of Employees,
Federal Procurement Data System 2009

	(a)	(b)	(c)	(d)	(e) (f) (g) (h) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v)																	
	NAICS Code	Industry Sector	Total Firms		Firm Counts by Number of Employees																	
					1-4		5-9		10-19		20-49		50-99		100-249		250-499		500-999		1,000 +	
			N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
(1)	236	Construction of Buildings	3,515	100%	637	18%	525	15%	640	18%	746	21%	363	10%	265	8%	117	3%	61	2%	161	5%
(2)	2361	Residential Building Construction	184	100%	74	40%	19	10%	29	16%	23	13%	16	9%	5	3%	6	3%	7	4%	5	3%
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	34	100%	12	35%	3	9%	6	18%	3	9%	1	3%	3	9%	2	6%	2	6%	2	6%
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	17	100%	3	18%	1	6%	3	18%	5	29%	2	12%		0%	1	6%	2	12%		0%
(5)	236117	New Housing Operative Builders	2	100%		0%		0%	1	50%		0%		0%	1	50%		0%		0%		0%
(6)	236118	Residential Remodelers	131	100%	59	45%	15	11%	19	15%	15	11%	13	10%	1	1%	3	2%	3	2%	3	2%
(7)	2362	Nonresidential Building Construction	3,331	100%	563	17%	506	15%	611	18%	723	22%	347	10%	260	8%	111	3%	54	2%	156	5%
(8)	236210	Industrial Building Construction	374	100%	64	17%	51	14%	74	20%	92	25%	41	11%	28	7%	10	3%	3	1%	11	3%
(9)	236220	Commercial and Institutional Building Construction	2,957	100%	499	17%	455	15%	537	18%	631	21%	306	10%	232	8%	101	3%	51	2%	145	5%
(10)	237	Heavy and Civil Engineering Construction	2,954	100%	640	22%	448	15%	499	17%	575	19%	303	10%	207	7%	94	3%	58	2%	130	4%
(11)	2371	Utility System Construction	827	100%	180	22%	135	16%	170	21%	145	18%	66	8%	45	5%	22	3%	15	2%	49	6%
(12)	237110	Water and Sewer Line and Related Structures Construction	493	100%	137	28%	95	19%	96	19%	82	17%	33	7%	22	4%	12	2%	4	1%	12	2%
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	72	100%	12	17%	10	14%	15	21%	12	17%	6	8%	6	8%	2	3%	2	3%	7	10%
(14)	237130	Power and Communication Line and Related Structures Construction	262	100%	31	12%	30	11%	59	23%	51	19%	27	10%	17	6%	8	3%	9	3%	30	11%
(15)	2372	Land Subdivision	6	100%	1	17%		0%		0%	1	17%	1	17%	1	17%		0%		0%	2	33%
(16)	237210	Land Subdivision	6	100%	1	17%		0%		0%	1	17%	1	17%	1	17%		0%		0%	2	33%
(17)	2373	Highway, Street, and Bridge Construction	995	100%	226	23%	161	16%	158	16%	191	19%	105	11%	67	7%	31	3%	15	2%	41	4%
(18)	237310	Highway, Street, and Bridge Construction	995	100%	226	23%	161	16%	158	16%	191	19%	105	11%	67	7%	31	3%	15	2%	41	4%
(19)	2379	Other Heavy and Civil Engineering Construction	1,126	100%	233	21%	152	13%	171	15%	238	21%	131	12%	94	8%	41	4%	28	2%	38	3%
(20)	237990	Other Heavy and Civil Engineering Construction	1,126	100%	233	21%	152	13%	171	15%	238	21%	131	12%	94	8%	41	4%	28	2%	38	3%
(21)	238	Specialty Trade Contractors	8,210	100%	2,037	25%	1,413	17%	1,453	18%	1,623	20%	714	9%	426	5%	165	2%	97	1%	282	3%
(22)	2381	Foundation, Structure, and Building Exterior Contractors	1,046	100%	282	27%	184	18%	198	19%	201	19%	90	9%	39	4%	20	2%	7	1%	25	2%
(23)	238110	Poured Concrete Foundation and Structure Contractors	142	100%	46	32%	18	13%	34	24%	27	19%	8	6%	2	1%	2	1%	2	1%	3	2%
(24)	238120	Structural Steel and Precast Concrete Contractors	82	100%	13	16%	17	21%	17	21%	18	22%	7	9%	5	6%	2	2%	2	2%	1	1%
(25)	238130	Framing Contractors	43	100%	17	40%	7	16%	5	12%	8	19%	2	5%	2	5%	1	2%		0%	1	2%
(26)	238140	Masonry Contractors	73	100%	24	33%	14	19%	10	14%	12	16%	6	8%	4	5%	2	3%		0%	1	1%
(27)	238150	Glass and Glazing Contractors	119	100%	28	24%	21	18%	30	25%	23	19%	9	8%	3	3%	2	2%		0%	3	3%
(28)	238160	Roofing Contractors	382	100%	91	24%	72	19%	66	17%	85	22%	41	11%	13	3%	7	2%		0%	7	2%
(29)	238170	Siding Contractors	24	100%	11	46%	6	25%	2	8%	3	13%	2	8%		0%		0%		0%		0%
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	181	100%	52	29%	29	16%	34	19%	25	14%	15	8%	10	6%	4	2%	3	2%	9	5%
(31)	2382	Building Equipment Contractors	4,034	100%	789	20%	678	17%	710	18%	880	22%	396	10%	254	6%	100	2%	59	1%	168	4%
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	1,908	100%	410	21%	329	17%	326	17%	379	20%	182	10%	111	6%	49	3%	22	1%	100	5%
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	1,694	100%	301	18%	276	16%	299	18%	403	24%	172	10%	119	7%	43	3%	29	2%	52	3%
(34)	238290	Other Building Equipment Contractors	432	100%	78	18%	73	17%	85	20%	98	23%	42	10%	24	6%	8	2%	8	2%	16	4%
(35)	2383	Building Finishing Contractors	1,220	100%	419	34%	223	18%	213	17%	189	15%	83	7%	38	3%	12	1%	4	0%	39	3%
(36)	238310	Drywall and Insulation Contractors	88	100%	29	33%	14	16%	12	14%	14	16%	7	8%	6	7%	3	3%	1	1%	2	2%
(37)	238320	Painting and Wall Covering Contractors	319	100%	124	39%	61	19%	50	16%	47	15%	20	6%	11	3%		0%		0%	6	2%
(38)	238330	Flooring Contractors	370	100%	131	35%	76	21%	72	19%	54	15%	23	6%	6	2%	1	0%	2	1%	5	1%
(39)	238340	Tile and Terrazzo Contractors	32	100%	11	34%	6	19%	5	16%	5	16%	2	6%	2	6%		0%		0%	1	3%
(40)	238350	Finish Carpentry Contractors	138	100%	57	41%	21	15%	20	14%	25	18%	8	6%	3	2%		0%	1	1%	3	2%
(41)	238390	Other Building Finishing Contractors	273	100%	67	25%	45	16%	54	20%	44	16%	23	8%	10	4%	8	3%		0%	22	8%
(42)	2389	Other Specialty Trade Contractors	1,910	100%	547	29%	328	17%	332	17%	353	18%	145	8%	95	5%	33	2%	27	1%	50	3%
(43)	238910	Site Preparation Contractors	425	100%	148	35%	69	16%	72	17%	80	19%	21	5%	14	3%	5	1%	6	1%	10	2%
(44)	238990	All Other Specialty Trade Contractors	1,485	100%	399	27%	259	17%	260	18%	273	18%	124	8%	81	5%	28	2%	21	1%	40	3%
(45)	23	All Construction Firms	14,679	100%	3,314	23%	2,386	16%	2,592	18%	2,944	20%	1,380	9%	898	6%	376	3%	216	1%	573	4%

Appendix Table E.9
Construction Firms, Nationwide,
by Number of Employees,
Federal Procurement Data System 2009

(a)	(b)	(c) (d) (e) (f) (g) (h) (i) (j) (k)								
		Cumulative % of Firms by Number of Employees								
NAICS Code	Industry Sector	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000 +
(1) 236	Construction of Buildings	18%	33%	51%	72%	83%	90%	94%	95%	100%
(2) 2361	Residential Building Construction	40%	51%	66%	79%	88%	90%	93%	97%	100%
(3) 236115	New Single-Family Housing Construction (except Operative Builders)	35%	44%	62%	71%	74%	82%	88%	94%	100%
(4) 236116	New Multifamily Housing Construction (except Operative Builders)	18%	24%	41%	71%	82%	82%	88%	100%	100%
(5) 236117	New Housing Operative Builders	0%	0%	50%	50%	50%	100%	100%	100%	100%
(6) 236118	Residential Remodelers	45%	56%	71%	82%	92%	93%	95%	98%	100%
(7) 2362	Nonresidential Building Construction	17%	32%	50%	72%	83%	90%	94%	95%	100%
(8) 236210	Industrial Building Construction	17%	31%	51%	75%	86%	94%	96%	97%	100%
(9) 236220	Commercial and Institutional Building Construction	17%	32%	50%	72%	82%	90%	93%	95%	100%
(10) 237	Heavy and Civil Engineering Construction	22%	37%	54%	73%	83%	90%	94%	96%	100%
(11) 2371	Utility System Construction	22%	38%	59%	76%	84%	90%	92%	94%	100%
(12) 237110	Water and Sewer Line and Related Structures Construction	28%	47%	67%	83%	90%	94%	97%	98%	100%
(13) 237120	Oil and Gas Pipeline and Related Structures Construction	17%	31%	51%	68%	76%	85%	88%	90%	100%
(14) 237130	Power and Communication Line and Related Structures Construction	12%	23%	46%	65%	76%	82%	85%	89%	100%
(15) 2372	Land Subdivision	17%	17%	17%	33%	50%	67%	67%	67%	100%
(16) 237210	Land Subdivision	17%	17%	17%	33%	50%	67%	67%	67%	100%
(17) 2373	Highway, Street, and Bridge Construction	23%	39%	55%	74%	85%	91%	94%	96%	100%
(18) 237310	Highway, Street, and Bridge Construction	23%	39%	55%	74%	85%	91%	94%	96%	100%
(19) 2379	Other Heavy and Civil Engineering Construction	21%	34%	49%	71%	82%	90%	94%	97%	100%
(20) 237990	Other Heavy and Civil Engineering Construction	21%	34%	49%	71%	82%	90%	94%	97%	100%
(21) 238	Specialty Trade Contractors	25%	42%	60%	79%	88%	93%	95%	97%	100%
(22) 2381	Foundation, Structure, and Building Exterior Contractors	27%	45%	63%	83%	91%	95%	97%	98%	100%
(23) 238110	Poured Concrete Foundation and Structure Contractors	32%	45%	69%	88%	94%	95%	96%	98%	100%
(24) 238120	Structural Steel and Precast Concrete Contractors	16%	37%	57%	79%	88%	94%	96%	99%	100%
(25) 238130	Framing Contractors	40%	56%	67%	86%	91%	95%	98%	98%	100%
(26) 238140	Masonry Contractors	33%	52%	66%	82%	90%	96%	99%	99%	100%
(27) 238150	Glass and Glazing Contractors	24%	41%	66%	86%	93%	96%	97%	97%	100%
(28) 238160	Roofing Contractors	24%	43%	60%	82%	93%	96%	98%	98%	100%
(29) 238170	Siding Contractors	46%	71%	79%	92%	100%	100%	100%	100%	100%
(30) 238190	Other Foundation, Structure, and Building Exterior Contractors	29%	45%	64%	77%	86%	91%	93%	95%	100%
(31) 2382	Building Equipment Contractors	20%	36%	54%	76%	86%	92%	94%	96%	100%
(32) 238210	Electrical Contractors and Other Wiring Installation Contractors	21%	39%	56%	76%	85%	91%	94%	95%	100%
(33) 238220	Plumbing, Heating, and Air-Conditioning Contractors	18%	34%	52%	76%	86%	93%	95%	97%	100%
(34) 238290	Other Building Equipment Contractors	18%	35%	55%	77%	87%	93%	94%	96%	100%
(35) 2383	Building Finishing Contractors	34%	53%	70%	86%	92%	95%	96%	97%	100%
(36) 238310	Drywall and Insulation Contractors	33%	49%	63%	78%	86%	93%	97%	98%	100%
(37) 238320	Painting and Wall Covering Contractors	39%	58%	74%	88%	95%	98%	98%	98%	100%
(38) 238330	Flooring Contractors	35%	56%	75%	90%	96%	98%	98%	99%	100%
(39) 238340	Tile and Terrazzo Contractors	34%	53%	69%	84%	91%	97%	97%	97%	100%
(40) 238350	Finish Carpentry Contractors	41%	57%	71%	89%	95%	97%	97%	98%	100%
(41) 238390	Other Building Finishing Contractors	25%	41%	61%	77%	85%	89%	92%	92%	100%
(42) 2389	Other Specialty Trade Contractors	29%	46%	63%	82%	89%	94%	96%	97%	100%
(43) 238910	Site Preparation Contractors	35%	51%	68%	87%	92%	95%	96%	98%	100%
(44) 238990	All Other Specialty Trade Contractors	27%	44%	62%	80%	89%	94%	96%	97%	100%
(45) 23	All Construction Firms	23%	39%	56%	77%	86%	92%	95%	96%	100%

Appendix Table E.10
Construction Firms, Nationwide,
by Number of Employees,
Average Firm Revenue,
Federal Procurement Data System 2009

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
	NAICS Code	Industry Sector	Average Firm Revenue by Number of Employees								
			1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000 +
(1)	236	Construction of Buildings	\$764,441	\$2,020,793	\$3,867,061	\$9,626,684	\$19,464,428	\$66,204,160	\$159,939,149	\$405,958,093	\$3,001,223,571
(2)	2361	Residential Building Construction	\$402,836	\$1,924,567	\$3,264,803	\$6,329,357	\$16,687,101	\$194,674,041	\$65,858,333	\$184,867,457	\$1,881,398,903
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	\$765,792	\$664,000	\$2,668,523	\$3,814,639	\$10,000,000	\$196,642,857	\$110,500,000	\$92,500,000	\$166,831,024
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	\$1,461,667	\$2,000,000	\$4,633,333	\$8,351,667	\$19,000,000		\$60,000,000	\$445,000,000	
(5)	236117	New Housing Operative Builders			\$3,500,000			\$350,000,000			
(6)	236118	Residential Remodelers	\$275,176	\$2,171,651	\$3,224,639	\$6,158,198	\$16,845,662	\$33,441,636	\$38,050,000	\$73,024,065	\$3,024,444,156
(7)	2362	Nonresidential Building Construction	\$811,970	\$2,024,406	\$3,895,646	\$9,731,578	\$19,592,489	\$63,733,585	\$165,024,599	\$434,617,990	\$3,037,115,387
(8)	236210	Industrial Building Construction	\$624,088	\$1,809,900	\$3,762,824	\$10,026,216	\$20,205,869	\$56,169,554	\$95,397,111	\$331,590,214	\$2,914,348,961
(9)	236220	Commercial and Institutional Building Construction	\$836,067	\$2,048,450	\$3,913,950	\$9,688,620	\$19,510,304	\$64,646,486	\$171,918,409	\$440,678,448	\$3,046,428,702
(10)	237	Heavy and Civil Engineering Construction	\$491,664	\$1,457,641	\$3,338,816	\$7,137,627	\$17,246,262	\$37,222,832	\$108,329,676	\$245,396,053	\$5,627,930,099
(11)	2371	Utility System Construction	\$437,773	\$1,260,705	\$2,701,619	\$6,704,838	\$17,743,815	\$41,153,675	\$69,811,755	\$222,237,665	\$7,127,953,074
(12)	237110	Water and Sewer Line and Related Structures Construction	\$398,725	\$1,139,232	\$2,485,011	\$5,782,380	\$14,027,463	\$27,649,266	\$74,431,895	\$114,649,580	\$7,614,400,375
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	\$854,557	\$2,251,352	\$2,212,881	\$6,507,395	\$31,493,621	\$73,333,697	\$80,000,000	\$106,000,000	\$999,536,859
(14)	237130	Power and Communication Line and Related Structures Construction	\$449,005	\$1,315,152	\$3,178,322	\$8,234,462	\$19,230,510	\$47,272,315	\$60,334,484	\$295,885,184	\$8,363,337,936
(15)	2372	Land Subdivision	\$1,825,000			\$1,500,000	\$15,000,000	\$15,500,000			\$38,349,998,208
(16)	237210	Land Subdivision	\$1,825,000			\$1,500,000	\$15,000,000	\$15,500,000			\$38,349,998,208
(17)	2373	Highway, Street, and Bridge Construction	\$461,067	\$1,348,402	\$3,480,148	\$6,637,402	\$16,994,347	\$33,120,814	\$76,836,902	\$365,129,114	\$4,422,541,509
(18)	237310	Highway, Street, and Bridge Construction	\$461,067	\$1,348,402	\$3,480,148	\$6,637,402	\$16,994,347	\$33,120,814	\$76,836,902	\$365,129,114	\$4,422,541,509
(19)	2379	Other Heavy and Civil Engineering Construction	\$557,251	\$1,748,260	\$3,841,698	\$7,826,430	\$17,214,650	\$38,495,917	\$152,809,439	\$193,659,620	\$3,272,026,684
(20)	237990	Other Heavy and Civil Engineering Construction	\$557,251	\$1,748,260	\$3,841,698	\$7,826,430	\$17,214,650	\$38,495,917	\$152,809,439	\$193,659,620	\$3,272,026,684
(21)	238	Specialty Trade Contractors	\$435,371	\$1,272,580	\$2,722,563	\$5,659,514	\$12,805,163	\$29,567,046	\$88,538,558	\$212,754,181	\$7,671,725,922
(22)	2381	Foundation, Structure, and Building Exterior Contractors	\$410,594	\$1,201,212	\$2,713,706	\$4,908,582	\$12,063,899	\$26,140,480	\$70,376,090	\$288,376,389	\$1,910,165,739
(23)	238110	Poured Concrete Foundation and Structure Contractors	\$386,790	\$2,103,595	\$1,857,063	\$5,058,071	\$18,069,805	\$19,144,680	\$28,750,000	\$85,000,000	\$620,000,000
(24)	238120	Structural Steel and Precast Concrete Contractors	\$484,014	\$1,161,528	\$3,514,480	\$4,794,745	\$12,478,161	\$33,975,853	\$24,497,500	\$360,741,760	\$791,846,016
(25)	238130	Framing Contractors	\$543,428	\$1,476,312	\$3,037,487	\$7,307,106	\$6,500,000	\$18,810,500	\$29,374,060		\$3,400,000,000
(26)	238140	Masonry Contractors	\$364,147	\$907,130	\$3,629,754	\$4,750,000	\$9,325,758	\$16,225,332	\$25,521,870		\$166,000,000
(27)	238150	Glass and Glazing Contractors	\$294,264	\$940,867	\$2,478,042	\$4,927,395	\$10,621,850	\$41,333,333	\$176,000,000		\$263,140,667
(28)	238160	Roofing Contractors	\$478,268	\$1,268,589	\$2,362,601	\$4,213,544	\$9,604,407	\$26,241,391	\$72,658,430		\$3,994,142,784
(29)	238170	Siding Contractors	\$176,394	\$600,368	\$3,000,000	\$4,000,000	\$10,136,367				
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	\$385,056	\$885,502	\$3,725,579	\$6,592,542	\$18,349,381	\$24,364,967	\$90,000,000	\$375,717,067	\$1,420,875,108
(31)	2382	Building Equipment Contractors	\$446,706	\$1,246,272	\$2,538,778	\$5,668,676	\$12,580,077	\$29,980,937	\$98,647,980	\$215,138,807	\$6,471,024,097
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	\$385,601	\$1,059,319	\$2,524,065	\$5,614,963	\$11,403,190	\$33,396,569	\$112,975,940	\$214,126,890	\$7,097,300,988
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	\$509,325	\$1,382,448	\$2,479,342	\$5,843,931	\$14,042,048	\$28,947,340	\$88,000,576	\$219,351,193	\$5,103,903,814
(34)	238290	Other Building Equipment Contractors	\$526,250	\$1,573,986	\$2,804,282	\$5,155,712	\$11,692,802	\$19,308,553	\$68,119,016	\$202,651,679	\$6,999,934,449
(35)	2383	Building Finishing Contractors	\$504,280	\$1,221,395	\$3,043,584	\$5,812,701	\$14,629,309	\$24,323,235	\$87,724,167	\$228,103,748	\$7,270,445,974
(36)	238310	Drywall and Insulation Contractors	\$817,617	\$1,155,391	\$1,601,603	\$11,557,772	\$9,838,571	\$20,127,516	\$77,000,000	\$364,324,992	\$24,482,500,480
(37)	238320	Painting and Wall Covering Contractors	\$325,520	\$913,266	\$2,319,717	\$3,633,419	\$12,368,659	\$19,295,612			\$2,932,106,901
(38)	238330	Flooring Contractors	\$610,075	\$1,385,372	\$3,641,445	\$5,648,855	\$15,684,564	\$28,044,630	\$110,000,000	\$161,500,000	\$3,563,760,205
(39)	238340	Tile and Terrazzo Contractors	\$824,818	\$951,761	\$2,475,511	\$5,893,505	\$6,877,750	\$30,300,000			\$3,500,000,000
(40)	238350	Finish Carpentry Contractors	\$475,404	\$756,273	\$1,912,192	\$5,407,887	\$11,807,250	\$22,486,624		\$225,090,000	\$1,102,114,667
(41)	238390	Other Building Finishing Contractors	\$464,584	\$1,635,683	\$3,708,755	\$6,734,501	\$18,653,520	\$29,493,845	\$88,961,250		\$8,743,845,709
(42)	2389	Other Specialty Trade Contractors	\$379,013	\$1,401,797	\$2,914,924	\$5,982,239	\$12,835,808	\$31,964,651	\$69,207,643	\$185,663,564	\$14,899,862,502
(43)	238910	Site Preparation Contractors	\$459,171	\$1,348,102	\$2,874,850	\$4,460,147	\$15,202,226	\$26,703,171	\$83,542,603	\$225,777,127	\$54,796,392,832
(44)	238990	All Other Specialty Trade Contractors	\$349,280	\$1,416,102	\$2,926,021	\$6,428,273	\$12,435,043	\$32,874,043	\$66,647,828	\$174,202,546	\$4,925,729,920
(45)	23	All Construction Firms	\$509,495	\$1,471,960	\$3,123,793	\$6,953,476	\$15,531,950	\$42,143,419	\$115,704,075	\$276,081,344	\$5,895,732,317

Appendix Table E.11
Construction Firms, Nationwide,
by Average Firm Revenue,
Federal Procurement Data System 2009

	(a)	(b)	(c)	(d)	(e) (f) (g) (h) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v) (w) (x) (y) (z) (aa) (ab) (ac) (ad)																											
					Firm Counts by Average Firm Revenue																											
	NAICS Code	Industry Sector	Total Firms		<\$10,000		\$10,000- \$20,000		\$20,000- \$30,000		\$30,000- \$40,000		\$40,000- \$50,000		\$50,000- \$75,000		\$75,000- \$100,000		\$100,000- \$150,000		\$150,000- \$200,000		\$200,000- \$250,000		\$250,000- \$500,000		\$500,000- \$750,000		\$750,000- \$1,000,000			
			N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
(1)	236	Construction of Buildings	3,515	100%	24	0.7%	12	0.3%	18	0.5%	11	0.3%	19	0.5%	43	1.2%	60	1.7%	64	1.8%	59	1.7%	61	1.7%	244	6.9%	134	3.8%	207	5.9%		
(2)	2361	Residential Building Construction	184	100%	8	4.3%	1	0.5%	3	1.6%	4	2.2%	4	2.2%	6	3.3%	6	3.3%	6	3.3%	9	4.9%	9	4.9%	17	9.2%	7	3.8%	8	4.3%		
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	34	100%	3	8.8%		0.0%		0.0%		0.0%	1	2.9%		0.0%	2	5.9%		0.0%		0.0%		0.0%	3	8.8%	1	2.9%	2	5.9%		
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	17	100%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%	1	5.9%		0.0%		0.0%		0.0%	1	5.9%		0.0%		
(5)	236117	New Housing Operative Builders	2	100%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		
(6)	236118	Residential Remodelers	131	100%	5	3.8%	1	0.8%	3	2.3%	4	3.1%	3	2.3%	6	4.6%	4	3.1%	5	3.8%	9	6.9%	9	6.9%	14	10.7%	5	3.8%	6	4.6%		
(7)	2362	Nonresidential Building Construction	3,331	100%	16	0.5%	11	0.3%	15	0.5%	7	0.2%	15	0.5%	37	1.1%	54	1.6%	58	1.7%	50	1.5%	52	1.6%	227	6.8%	127	3.8%	199	6.0%		
(8)	236210	Industrial Building Construction	374	100%	2	0.5%	2	0.5%	1	0.3%	1	0.3%	2	0.5%	4	1.1%	6	1.6%	5	1.3%	7	1.9%	4	1.1%	26	7.0%	16	4.3%	24	6.4%		
(9)	236220	Commercial and Institutional Building Construction	2,957	100%	14	0.5%	9	0.3%	14	0.5%	6	0.2%	13	0.4%	33	1.1%	48	1.6%	53	1.8%	43	1.5%	48	1.6%	201	6.8%	111	3.8%	175	5.9%		
(10)	237	Heavy and Civil Engineering Construction	2,954	100%	9	0.3%	9	0.3%	15	0.5%	13	0.4%	22	0.7%	35	1.2%	83	2.8%	67	2.3%	67	2.3%	73	2.5%	242	8.2%	145	4.9%	204	6.9%		
(11)	2371	Utility System Construction	827	100%	1	0.1%	1	0.1%	3	0.4%	3	0.4%	5	0.6%	9	1.1%	24	2.9%	19	2.3%	23	2.8%	21	2.5%	74	8.9%	49	5.9%	76	9.2%		
(12)	237110	Water and Sewer Line and Related Structures Construction	493	100%		0.0%		0.0%	3	0.6%	2	0.4%	2	0.4%	7	1.4%	18	3.7%	13	2.6%	19	3.9%	15	3.0%	58	11.8%	34	6.9%	52	10.5%		
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	72	100%		0.0%		0.0%		0.0%		0.0%		0.0%	1	1.4%	2	2.8%	1	1.4%		0.0%		0.0%	5	6.9%	5	6.9%	7	9.7%		
(14)	237130	Power and Communication Line and Related Structures Construction	262	100%	1	0.4%	1	0.4%		0.0%	1	0.4%	3	1.1%	1	0.4%	4	1.5%	5	1.9%	4	1.5%	6	2.3%	11	4.2%	10	3.8%	17	6.5%		
(15)	2372	Land Subdivision	6	100%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		
(16)	237210	Land Subdivision	6	100%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		
(17)	2373	Highway, Street, and Bridge Construction	995	100%	4	0.4%	3	0.3%	5	0.5%	6	0.6%	10	1.0%	9	0.9%	33	3.3%	27	2.7%	21	2.1%	34	3.4%	78	7.8%	53	5.3%	66	6.6%		
(18)	237310	Highway, Street, and Bridge Construction	995	100%	4	0.4%	3	0.3%	5	0.5%	6	0.6%	10	1.0%	9	0.9%	33	3.3%	27	2.7%	21	2.1%	34	3.4%	78	7.8%	53	5.3%	66	6.6%		
(19)	2379	Other Heavy and Civil Engineering Construction	1,126	100%	4	0.4%	5	0.4%	7	0.6%	4	0.4%	7	0.6%	17	1.5%	26	2.3%	21	1.9%	23	2.0%	18	1.6%	90	8.0%	43	3.8%	62	5.5%		
(20)	237990	Other Heavy and Civil Engineering Construction	1,126	100%	4	0.4%	5	0.4%	7	0.6%	4	0.4%	7	0.6%	17	1.5%	26	2.3%	21	1.9%	23	2.0%	18	1.6%	90	8.0%	43	3.8%	62	5.5%		
(21)	238	Specialty Trade Contractors	8,210	100%	54	0.7%	62	0.8%	57	0.7%	57	0.7%	93	1.1%	110	1.3%	234	2.9%	248	3.0%	232	2.8%	200	2.4%	856	10.4%	437	5.3%	604	7.4%		
(22)	2381	Foundation, Structure, and Building Exterior Contractors	1,046	100%	8	0.8%	5	0.5%	11	1.1%	10	1.0%	16	1.5%	12	1.1%	36	3.4%	35	3.3%	28	2.7%	34	3.3%	116	11.1%	63	6.0%	84	8.0%		
(23)	238110	Poured Concrete Foundation and Structure Contractors	142	100%	1	0.7%	2	1.4%	1	0.7%		0.0%	3	2.1%	2	1.4%	5	3.5%	6	4.2%	4	2.8%	4	2.8%	25	17.6%	9	6.3%	8	5.6%		
(24)	238120	Structural Steel and Precast Concrete Contractors	82	100%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%	1	1.2%	3	3.7%	2	2.4%		0.0%	10	12.2%	6	7.3%	7	8.5%		
(25)	238130	Framing Contractors	43	100%		0.0%		0.0%		0.0%	1	2.3%	1	2.3%		0.0%	1	2.3%	2	4.7%	3	7.0%	1	2.3%	5	11.6%	3	7.0%	3	7.0%		
(26)	238140	Masonry Contractors	73	100%	1	1.4%		0.0%		0.0%	1	1.4%	1	1.4%		0.0%	7	9.6%	4	5.5%	1	1.4%	4	5.5%	8	11.0%	2	2.7%	7	9.6%		
(27)	238150	Glass and Glazing Contractors	119	100%	1	0.8%		0.0%	1	0.8%	1	0.8%	1	0.8%	1	0.8%	4	3.4%	4	3.4%	3	2.5%	4	3.4%	13	10.9%	6	5.0%	9	7.6%		
(28)	238160	Roofing Contractors	382	100%	2	0.5%	3	0.8%	3	0.8%	3	0.8%	6	1.6%	7	1.8%	11	2.9%	9	2.4%	8	2.1%	13	3.4%	35	9.2%	23	6.0%	36	9.4%		
(29)	238170	Siding Contractors	24	100%		0.0%		0.0%	2	8.3%	2	8.3%	2	8.3%	1	4.2%		0.0%	1	4.2%	1	4.2%	3	12.5%	2	8.3%	1	4.2%		0.0%		
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	181	100%	3	1.7%		0.0%	4	2.2%	2	1.1%	2	1.1%	1	0.6%	7	3.9%	6	3.3%	6	3.3%	5	2.8%	18	9.9%	13	7.2%	14	7.7%		
(31)	2382	Building Equipment Contractors	4,034	100%	16	0.4%	26	0.6%	21	0.5%	14	0.3%	25	0.6%	44	1.1%	71	1.8%	88	2.2%	107	2.7%	80	2.0%	386	9.6%	194	4.8%	291	7.2%		
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	1,908	100%	10	0.5%	11	0.6%	12	0.6%	7	0.4%	16	0.8%	27	1.4%	37	1.9%	49	2.6%	61	3.2%	42	2.2%	227	11.9%	96	5.0%	129	6.8%		
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	1,694	100%	6	0.4%	12	0.7%	7	0.4%	5	0.3%	8	0.5%	14	0.8%	29	1.7%	29	1.7%	35	2.1%	28	1.7%	131	7.7%	85	5.0%	118	7.0%		
(34)	238290	Other Building Equipment Contractors	432	100%		0.0%	3	0.7%	2	0.5%	2	0.5%	1	0.2%	3	0.7%	5	1.2%	10	2.3%	11	2.5%	10	2.3%	28	6.5%	13	3.0%	44	10.2%		
(35)	2383	Building Finishing Contractors	1,220	100%	11	0.9%	14	1.1%	10	0.8%	17	1.4%	25	2.0%	22	1.8%	58	4.8%	52	4.3%	39	3.2%	32	2.6%	155	12.7%	74	6.1%	100	8.2%		
(36)	238310	Drywall and Insulation Contractors	88	100%		0.0%		0.0%		0.0%		0.0%	3	3.4%		0.0%	2	2.3%	5	5.7%	1	1.1%	2	2.3%	12	13.6%	3	3.4%	9	10.2%		
(37)	238320	Painting and Wall Covering Contractors	319	100%	4	1.3%	8	2.5%	4	1.3%	12	3.8%	11	3.4%	9	2.8%	25	7.8%	17	5.3%	17	5.3%	10	3.1%	39	12.2%	19	6.0%	19	6.0%		
(38)	238330	Flooring Contractors	370	100%	1	0.3%	4	1.1%	1	0.3%	2	0.5%	7	1.9%	3	0.8%	13	3.5%	14	3.8%	6	1.6%	12	3.2%	45	12.2%	30	8.1%	45	12.2%		
(39)	238340	Tile and Terrazzo Contractors	32	100%		0.0%		0.0%	1	3.1%		0.0%		0.0%		0.0%	3	9.4%	1	3.1%	2	6.3%		0.0%	3	9.4%	1	3.1%	3	9.4%		
(40)	238350	Finish Carpentry Contractors	138	100%	2	1.4%	2	1.4%	2	1.4%	2	1.4%	3	2.2%	7	5.1%	7	5.1%	8	5.8%	3	2.2%	3	2.2%	25	18.1%	3	2.2%	10	7.2%		
(41)	238390	Other Building Finishing Contractors	273	100%	4	1.5%		0.0%	2	0.7%	1	0.4%	1	0.4%	3	1.1%	8	2.9%	7	2.6%	10	3.7%	5	1.8%	31	11.4%	18	6.6%	14	5.1%		
(42)	2389	Other Specialty Trade Contractors	1,910	100%	19	1.0%	17	0.9%	15	0.8%	16	0.8%	27	1.4%	32	1.7%	69	3.6%	73	3.8%	58	3.0%	54	2.8%	199	10.4%	106	5.5%	129	6.8%		
(43)	238910	Site Preparation Contractors	425	100%	10	2.4%	2	0.5%	3	0.7%	4	0.9%	9	2.1%	5	1.2%	16	3.8%	19	4.5%	14	3.3%	15	3.5%	46	10.8%	28	6.6%	33	7.8%		
(44)	238990	All Other Specialty Trade Contractors	1,485	100%	9	0.6%	15	1.0%	12	0.8%	12	0.8%	18	1.2%	27	1.8%	53	3.6%	54	3.6%	44	3.0%	39	2.6%	153	10.3%	78	5.3%	96	6.5%		
(45)	23	All Construction Firms	14,679	100%	87	0.6%	83	0.6%	90	0.6%	81	0.6%	134	0.9%	188	1.3%	377	2.6%														

Appendix Table E.11
Construction Firms, Nationwide,
by Average Firm Revenue,
Federal Procurement Data System 2009

	(a)	(b)	(c)	(d)	Firm Counts by Average Firm Revenue																		(au)	(av)
	NAICS Code	Industry Sector	Total Firms		\$1,000,000- \$2,000,000		\$2,000,000- \$5,000,000		\$5,000,000- \$10,000,000		\$10,000,000- \$25,000,000		\$25,000,000- \$50,000,000		\$50,000,000- \$100,000,000		\$100,000,000- \$250,000,000		\$250,000,000- \$500,000,000		> \$500,000,000			
			N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
(1)	236	Construction of Buildings	3,515	100%	383	10.9%	639	18.2%	465	13.2%	487	13.9%	187	5.3%	112	3.2%	92	2.6%	64	1.8%	130	3.7%		
(2)	2361	Residential Building Construction	184	100%	21	11.4%	25	13.6%	16	8.7%	9	4.9%	6	3.3%	7	3.8%	5	2.7%	3	1.6%	4	2.2%		
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	34	100%	6	17.6%	4	11.8%	3	8.8%		0.0%	1	2.9%	3	8.8%	3	8.8%	2	5.9%		0.0%		
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	17	100%	3	17.6%	4	23.5%	2	11.8%	3	17.6%		0.0%	1	5.9%	1	5.9%		0.0%	1	5.9%		
(5)	236117	New Housing Operative Builders	2	100%		0.0%	1	50.0%		0.0%		0.0%		0.0%		0.0%		0.0%	1	50.0%		0.0%		
(6)	236118	Residential Remodelers	131	100%	12	9.2%	16	12.2%	11	8.4%	6	4.6%	5	3.8%	3	2.3%	1	0.8%		0.0%	3	2.3%		
(7)	2362	Nonresidential Building Construction	3,331	100%	362	10.9%	614	18.4%	449	13.5%	478	14.4%	181	5.4%	105	3.2%	87	2.6%	61	1.8%	126	3.8%		
(8)	236210	Industrial Building Construction	374	100%	42	11.2%	63	16.8%	59	15.8%	61	16.3%	20	5.3%	11	2.9%	5	1.3%	5	1.3%	8	2.1%		
(9)	236220	Commercial and Institutional Building Construction	2,957	100%	320	10.8%	551	18.6%	390	13.2%	417	14.1%	161	5.4%	94	3.2%	82	2.8%	56	1.9%	118	4.0%		
(10)	237	Heavy and Civil Engineering Construction	2,954	100%	303	10.3%	530	17.9%	371	12.6%	315	10.7%	152	5.1%	97	3.3%	69	2.3%	38	1.3%	95	3.2%		
(11)	2371	Utility System Construction	827	100%	94	11.4%	156	18.9%	89	10.8%	59	7.1%	34	4.1%	25	3.0%	17	2.1%	9	1.1%	36	4.4%		
(12)	237110	Water and Sewer Line and Related Structures Construction	493	100%	60	12.2%	91	18.5%	47	9.5%	36	7.3%	9	1.8%	11	2.2%	7	1.4%	3	0.6%	6	1.2%		
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	72	100%	7	9.7%	14	19.4%	7	9.7%	5	6.9%	6	8.3%	5	6.9%	2	2.8%	2	2.8%	3	4.2%		
(14)	237130	Power and Communication Line and Related Structures Construction	262	100%	27	10.3%	51	19.5%	35	13.4%	18	6.9%	19	7.3%	9	3.4%	8	3.1%	4	1.5%	27	10.3%		
(15)	2372	Land Subdivision	6	100%	2	33.3%		0.0%		0.0%	2	33.3%		0.0%		0.0%		0.0%		0.0%	2	33.3%		
(16)	237210	Land Subdivision	6	100%	2	33.3%		0.0%		0.0%	2	33.3%		0.0%		0.0%		0.0%		0.0%	2	33.3%		
(17)	2373	Highway, Street, and Bridge Construction	995	100%	98	9.8%	176	17.7%	127	12.8%	100	10.1%	56	5.6%	26	2.6%	20	2.0%	14	1.4%	29	2.9%		
(18)	237310	Highway, Street, and Bridge Construction	995	100%	98	9.8%	176	17.7%	127	12.8%	100	10.1%	56	5.6%	26	2.6%	20	2.0%	14	1.4%	29	2.9%		
(19)	2379	Other Heavy and Civil Engineering Construction	1,126	100%	109	9.7%	198	17.6%	155	13.8%	154	13.7%	62	5.5%	46	4.1%	32	2.8%	15	1.3%	28	2.5%		
(20)	237990	Other Heavy and Civil Engineering Construction	1,126	100%	109	9.7%	198	17.6%	155	13.8%	154	13.7%	62	5.5%	46	4.1%	32	2.8%	15	1.3%	28	2.5%		
(21)	238	Specialty Trade Contractors	8,210	100%	1,043	12.7%	1,572	19.1%	963	11.7%	613	7.5%	257	3.1%	150	1.8%	105	1.3%	64	0.8%	199	2.4%		
(22)	2381	Foundation, Structure, and Building Exterior Contractors	1,046	100%	136	13.0%	196	18.7%	109	10.4%	73	7.0%	31	3.0%	10	1.0%	9	0.9%	8	0.8%	16	1.5%		
(23)	238110	Poured Concrete Foundation and Structure Contractors	142	100%	19	13.4%	27	19.0%	8	5.6%	8	5.6%	5	3.5%	2	1.4%		0.0%	1	0.7%	2	1.4%		
(24)	238120	Structural Steel and Precast Concrete Contractors	82	100%	14	17.1%	15	18.3%	8	9.8%	8	9.8%	5	6.1%		0.0%		0.0%	2	2.4%	1	1.2%		
(25)	238130	Framing Contractors	43	100%	5	11.6%	5	11.6%	7	16.3%	3	7.0%	2	4.7%		0.0%		0.0%		0.0%	1	2.3%		
(26)	238140	Masonry Contractors	73	100%	4	5.5%	15	20.5%	8	11.0%	8	11.0%	1	1.4%		0.0%	1	1.4%		0.0%		0.0%		
(27)	238150	Glass and Glazing Contractors	119	100%	18	15.1%	29	24.4%	11	9.2%	5	4.2%	2	1.7%	2	1.7%	3	2.5%	1	0.8%		0.0%		
(28)	238160	Roofing Contractors	382	100%	58	15.2%	73	19.1%	49	12.8%	22	5.8%	9	2.4%	3	0.8%	2	0.5%	2	0.5%	5	1.3%		
(29)	238170	Siding Contractors	24	100%	2	8.3%	5	20.8%	1	4.2%	1	4.2%		0.0%		0.0%		0.0%		0.0%		0.0%		
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	181	100%	16	8.8%	27	14.9%	17	9.4%	18	9.9%	7	3.9%	3	1.7%	3	1.7%	2	1.1%	7	3.9%		
(31)	2382	Building Equipment Contractors	4,034	100%	523	13.0%	832	20.6%	528	13.1%	334	8.3%	134	3.3%	98	2.4%	62	1.5%	41	1.0%	119	2.9%		
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	1,908	100%	232	12.2%	343	18.0%	236	12.4%	152	8.0%	46	2.4%	49	2.6%	34	1.8%	22	1.2%	70	3.7%		
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	1,694	100%	227	13.4%	389	23.0%	230	13.6%	150	8.9%	73	4.3%	42	2.5%	23	1.4%	18	1.1%	35	2.1%		
(34)	238290	Other Building Equipment Contractors	432	100%	64	14.8%	100	23.1%	62	14.4%	32	7.4%	15	3.5%	7	1.6%	5	1.2%	1	0.2%	14	3.2%		
(35)	2383	Building Finishing Contractors	1,220	100%	150	12.3%	201	16.5%	115	9.4%	61	5.0%	33	2.7%	9	0.7%	10	0.8%	4	0.3%	28	2.3%		
(36)	238310	Drywall and Insulation Contractors	88	100%	14	15.9%	14	15.9%	8	9.1%	8	9.1%	2	2.3%	1	1.1%	1	1.1%	1	1.1%	2	2.3%		
(37)	238320	Painting and Wall Covering Contractors	319	100%	33	10.3%	46	14.4%	25	7.8%	11	3.4%	4	1.3%	2	0.6%	2	0.6%		0.0%	2	0.6%		
(38)	238330	Flooring Contractors	370	100%	54	14.6%	63	17.0%	36	9.7%	17	4.6%	8	2.2%	2	0.5%	1	0.3%	1	0.3%	5	1.4%		
(39)	238340	Tile and Terrazzo Contractors	32	100%	4	12.5%	7	21.9%	3	9.4%	2	6.3%	1	3.1%		0.0%		0.0%		0.0%	1	3.1%		
(40)	238350	Finish Carpentry Contractors	138	100%	13	9.4%	23	16.7%	13	9.4%	7	5.1%	1	0.7%		0.0%	1	0.7%		0.0%	3	2.2%		
(41)	238390	Other Building Finishing Contractors	273	100%	32	11.7%	48	17.6%	30	11.0%	16	5.9%	17	6.2%	4	1.5%	5	1.8%	2	0.7%	15	5.5%		
(42)	2389	Other Specialty Trade Contractors	1,910	100%	234	12.3%	343	18.0%	211	11.0%	145	7.6%	59	3.1%	33	1.7%	24	1.3%	11	0.6%	36	1.9%		
(43)	238910	Site Preparation Contractors	425	100%	49	11.5%	91	21.4%	31	7.3%	19	4.5%	7	1.6%	8	1.9%	4	0.9%	6	1.4%	6	1.4%		
(44)	238990	All Other Specialty Trade Contractors	1,485	100%	185	12.5%	252	17.0%	180	12.1%	126	8.5%	52	3.5%	25	1.7%	20	1.3%	5	0.3%	30	2.0%		
(45)	23	All Construction Firms	14,679	100%	1,729	11.8%	2,741	18.7%	1,799	12.3%	1,415	9.6%	596	4.1%	359	2.4%	266	1.8%	166	1.1%	424	2.9%		

Appendix Table E.12
Construction Firms, Nationwide,
Cumulative Percentage,
by Average Firm Revenue,
Federal Procurement Data System 2009

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)
			Cumulative % of Firms by Average Firm Revenue														
	NAICS Code	Industry Sector	<\$10,000	\$10,000- \$20,000	\$20,000- \$30,000	\$30,000- \$40,000	\$40,000- \$50,000	\$50,000- \$75,000	\$75,000- \$100,000	\$100,000- \$150,000	\$150,000- \$200,000	\$200,000- \$250,000	\$250,000- \$500,000	\$500,000- \$750,000	\$750,000- \$1,000,000	\$1,000,000- \$2,000,000	\$2,000,000- \$5,000,000
(1)	236	Construction of Buildings	0.7%	1.0%	1.5%	1.8%	2.4%	3.6%	5.3%	7.1%	8.8%	10.6%	17.5%	21.3%	27.2%	38.1%	56.3%
(2)	2361	Residential Building Construction	4.3%	4.9%	6.5%	8.7%	10.9%	14.1%	17.4%	20.7%	25.5%	30.4%	39.7%	43.5%	47.8%	59.2%	72.8%
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	8.8%	8.8%	8.8%	8.8%	11.8%	11.8%	17.6%	17.6%	17.6%	17.6%	26.5%	29.4%	35.3%	52.9%	64.7%
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	5.9%	5.9%	5.9%	11.8%	11.8%	29.4%	52.9%
(5)	236117	New Housing Operative Builders	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%
(6)	236118	Residential Remodelers	3.8%	4.6%	6.9%	9.9%	12.2%	16.8%	19.8%	23.7%	30.5%	37.4%	48.1%	51.9%	56.5%	65.6%	77.9%
(7)	2362	Nonresidential Building Construction	0.5%	0.8%	1.3%	1.5%	1.9%	3.0%	4.7%	6.4%	7.9%	9.5%	16.3%	20.1%	26.1%	36.9%	55.4%
(8)	236210	Industrial Building Construction	0.5%	1.1%	1.3%	1.6%	2.1%	3.2%	4.8%	6.1%	8.0%	9.1%	16.0%	20.3%	26.7%	38.0%	54.8%
(9)	236220	Commercial and Institutional Building Construction	0.5%	0.8%	1.3%	1.5%	1.9%	3.0%	4.6%	6.4%	7.9%	9.5%	16.3%	20.1%	26.0%	36.8%	55.4%
(10)	237	Heavy and Civil Engineering Construction	0.3%	0.6%	1.1%	1.6%	2.3%	3.5%	6.3%	8.6%	10.8%	13.3%	21.5%	26.4%	33.3%	43.6%	61.5%
(11)	2371	Utility System Construction	0.1%	0.2%	0.6%	1.0%	1.6%	2.7%	5.6%	7.9%	10.6%	13.2%	22.1%	28.1%	37.2%	48.6%	67.5%
(12)	237110	Water and Sewer Line and Related Structures Construction	0.0%	0.0%	0.6%	1.0%	1.4%	2.8%	6.5%	9.1%	13.0%	16.0%	27.8%	34.7%	45.2%	57.4%	75.9%
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	4.2%	5.6%	5.6%	5.6%	12.5%	19.4%	29.2%	38.9%	58.3%
(14)	237130	Power and Communication Line and Related Structures Construction	0.4%	0.8%	0.8%	1.1%	2.3%	2.7%	4.2%	6.1%	7.6%	9.9%	14.1%	17.9%	24.4%	34.7%	54.2%
(15)	2372	Land Subdivision	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	33.3%
(16)	237210	Land Subdivision	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	33.3%
(17)	2373	Highway, Street, and Bridge Construction	0.4%	0.7%	1.2%	1.8%	2.8%	3.7%	7.0%	9.7%	11.9%	15.3%	23.1%	28.4%	35.1%	44.9%	62.6%
(18)	237310	Highway, Street, and Bridge Construction	0.4%	0.7%	1.2%	1.8%	2.8%	3.7%	7.0%	9.7%	11.9%	15.3%	23.1%	28.4%	35.1%	44.9%	62.6%
(19)	2379	Other Heavy and Civil Engineering Construction	0.4%	0.8%	1.4%	1.8%	2.4%	3.9%	6.2%	8.1%	10.1%	11.7%	19.7%	23.5%	29.0%	38.7%	56.3%
(20)	237990	Other Heavy and Civil Engineering Construction	0.4%	0.8%	1.4%	1.8%	2.4%	3.9%	6.2%	8.1%	10.1%	11.7%	19.7%	23.5%	29.0%	38.7%	56.3%
(21)	238	Specialty Trade Contractors	0.7%	1.4%	2.1%	2.8%	3.9%	5.3%	8.1%	11.1%	14.0%	16.4%	26.8%	32.2%	39.5%	52.2%	71.4%
(22)	2381	Foundation, Structure, and Building Exterior Contractors	0.8%	1.2%	2.3%	3.3%	4.8%	5.9%	9.4%	12.7%	15.4%	18.6%	29.7%	35.8%	43.8%	56.8%	75.5%
(23)	238110	Poured Concrete Foundation and Structure Contractors	0.7%	2.1%	2.8%	2.8%	4.9%	6.3%	9.9%	14.1%	16.9%	19.7%	37.3%	43.7%	49.3%	62.7%	81.7%
(24)	238120	Structural Steel and Precast Concrete Contractors	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	4.9%	7.3%	7.3%	19.5%	26.8%	35.4%	52.4%	70.7%
(25)	238130	Framing Contractors	0.0%	0.0%	0.0%	2.3%	4.7%	4.7%	7.0%	11.6%	18.6%	20.9%	32.6%	39.5%	46.5%	58.1%	69.8%
(26)	238140	Masonry Contractors	1.4%	1.4%	1.4%	2.7%	4.1%	4.1%	13.7%	19.2%	20.5%	26.0%	37.0%	39.7%	49.3%	54.8%	75.3%
(27)	238150	Glass and Glazing Contractors	0.8%	0.8%	1.7%	2.5%	3.4%	4.2%	7.6%	10.9%	13.4%	16.8%	27.7%	32.8%	40.3%	55.5%	79.8%
(28)	238160	Roofing Contractors	0.5%	1.3%	2.1%	2.9%	4.5%	6.3%	9.2%	11.5%	13.6%	17.0%	26.2%	32.2%	41.6%	56.8%	75.9%
(29)	238170	Siding Contractors	0.0%	0.0%	8.3%	16.7%	25.0%	29.2%	29.2%	33.3%	37.5%	50.0%	58.3%	62.5%	62.5%	70.8%	91.7%
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	1.7%	1.7%	3.9%	5.0%	6.1%	6.6%	10.5%	13.8%	17.1%	19.9%	29.8%	37.0%	44.8%	53.6%	68.5%
(31)	2382	Building Equipment Contractors	0.4%	1.0%	1.6%	1.9%	2.5%	3.6%	5.4%	7.6%	10.2%	12.2%	21.8%	26.6%	33.8%	46.8%	67.4%
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	0.5%	1.1%	1.7%	2.1%	2.9%	4.4%	6.3%	8.9%	12.1%	14.3%	26.2%	31.2%	37.9%	50.1%	68.1%
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	0.4%	1.1%	1.5%	1.8%	2.2%	3.1%	4.8%	6.5%	8.6%	10.2%	17.9%	23.0%	29.9%	43.3%	66.3%
(34)	238290	Other Building Equipment Contractors	0.0%	0.7%	1.2%	1.6%	1.9%	2.5%	3.7%	6.0%	8.6%	10.9%	17.4%	20.4%	30.6%	45.4%	68.5%
(35)	2383	Building Finishing Contractors	0.9%	2.0%	2.9%	4.3%	6.3%	8.1%	12.9%	17.1%	20.3%	23.0%	35.7%	41.7%	49.9%	62.2%	78.7%
(36)	238310	Drywall and Insulation Contractors	0.0%	0.0%	0.0%	0.0%	3.4%	3.4%	5.7%	11.4%	12.5%	14.8%	28.4%	31.8%	42.0%	58.0%	73.9%
(37)	238320	Painting and Wall Covering Contractors	1.3%	3.8%	5.0%	8.8%	12.2%	15.0%	22.9%	28.2%	33.5%	36.7%	48.9%	54.9%	60.8%	71.2%	85.6%
(38)	238330	Flooring Contractors	0.3%	1.4%	1.6%	2.2%	4.1%	4.9%	8.4%	12.2%	13.8%	17.0%	29.2%	37.3%	49.5%	64.1%	81.1%
(39)	238340	Tile and Terrazzo Contractors	0.0%	0.0%	3.1%	3.1%	3.1%	3.1%	12.5%	15.6%	21.9%	21.9%	31.3%	34.4%	43.8%	56.3%	78.1%
(40)	238350	Finish Carpentry Contractors	1.4%	2.9%	4.3%	5.8%	8.0%	13.0%	18.1%	23.9%	26.1%	28.3%	46.4%	48.6%	55.8%	65.2%	81.9%
(41)	238390	Other Building Finishing Contractors	1.5%	1.5%	2.2%	2.6%	2.9%	4.0%	7.0%	9.5%	13.2%	15.0%	26.4%	33.0%	38.1%	49.8%	67.4%
(42)	2389	Other Specialty Trade Contractors	1.0%	1.9%	2.7%	3.5%	4.9%	6.6%	10.2%	14.0%	17.1%	19.9%	30.3%	35.9%	42.6%	54.9%	72.8%
(43)	238910	Site Preparation Contractors	2.4%	2.8%	3.5%	4.5%	6.6%	7.8%	11.5%	16.0%	19.3%	22.8%	33.6%	40.2%	48.0%	59.5%	80.9%
(44)	238990	All Other Specialty Trade Contractors	0.6%	1.6%	2.4%	3.2%	4.4%	6.3%	9.8%	13.5%	16.4%	19.1%	29.4%	34.6%	41.1%	53.5%	70.5%
(45)	23	All Construction Firms	0.6%	1.2%	1.8%	2.3%	3.2%	4.5%	7.1%	9.7%	12.1%	14.4%	23.5%	28.4%	35.3%	47.1%	65.8%

Appendix Table E.12
Construction Firms, Nationwide,
Cumulative Percentage,
by Average Firm Revenue,
Federal Procurement Data System 2009

(a)	(b)	(c) Cumulative Percentage of Firms by Average Firm Revenue						
		(r)	(s)	(t)	(u)	(v)	(w)	(x)
NAICS Code	Industry Sector	\$5,000,000- \$10,000,000	\$10,000,000- \$25,000,000	\$25,000,000- \$50,000,000	\$50,000,000- \$100,000,000	\$100,000,000- \$250,000,000	\$250,000,000- \$500,000,000	> \$500,000,000
(1) 236	Construction of Buildings	69.5%	83.4%	88.7%	91.9%	94.5%	96.3%	100.0%
(2) 2361	Residential Building Construction	81.5%	86.4%	89.7%	93.5%	96.2%	97.8%	100.0%
(3) 236115	New Single-Family Housing Construction (except Operative Builders)	73.5%	73.5%	76.5%	85.3%	94.1%	100.0%	100.0%
(4) 236116	New Multifamily Housing Construction (except Operative Builders)	64.7%	82.4%	82.4%	88.2%	94.1%	94.1%	100.0%
(5) 236117	New Housing Operative Builders	50.0%	50.0%	50.0%	50.0%	50.0%	100.0%	100.0%
(6) 236118	Residential Remodelers	86.3%	90.8%	94.7%	96.9%	97.7%	97.7%	100.0%
(7) 2362	Nonresidential Building Construction	68.8%	83.2%	88.6%	91.8%	94.4%	96.2%	100.0%
(8) 236210	Industrial Building Construction	70.6%	86.9%	92.2%	95.2%	96.5%	97.9%	100.0%
(9) 236220	Commercial and Institutional Building Construction	68.6%	82.7%	88.2%	91.3%	94.1%	96.0%	100.0%
(10) 237	Heavy and Civil Engineering Construction	74.1%	84.7%	89.9%	93.2%	95.5%	96.8%	100.0%
(11) 2371	Utility System Construction	78.2%	85.4%	89.5%	92.5%	94.6%	95.6%	100.0%
(12) 237110	Water and Sewer Line and Related Structures Construction	85.4%	92.7%	94.5%	96.8%	98.2%	98.8%	100.0%
(13) 237120	Oil and Gas Pipeline and Related Structures Construction	68.1%	75.0%	83.3%	90.3%	93.1%	95.8%	100.0%
(14) 237130	Power and Communication Line and Related Structures Construction	67.6%	74.4%	81.7%	85.1%	88.2%	89.7%	100.0%
(15) 2372	Land Subdivision	33.3%	66.7%	66.7%	66.7%	66.7%	66.7%	100.0%
(16) 237210	Land Subdivision	33.3%	66.7%	66.7%	66.7%	66.7%	66.7%	100.0%
(17) 2373	Highway, Street, and Bridge Construction	75.4%	85.4%	91.1%	93.7%	95.7%	97.1%	100.0%
(18) 237310	Highway, Street, and Bridge Construction	75.4%	85.4%	91.1%	93.7%	95.7%	97.1%	100.0%
(19) 2379	Other Heavy and Civil Engineering Construction	70.1%	83.7%	89.3%	93.3%	96.2%	97.5%	100.0%
(20) 237990	Other Heavy and Civil Engineering Construction	70.1%	83.7%	89.3%	93.3%	96.2%	97.5%	100.0%
(21) 238	Specialty Trade Contractors	83.1%	90.6%	93.7%	95.5%	96.8%	97.6%	100.0%
(22) 2381	Foundation, Structure, and Building Exterior Contractors	85.9%	92.9%	95.9%	96.8%	97.7%	98.5%	100.0%
(23) 238110	Poured Concrete Foundation and Structure Contractors	87.3%	93.0%	96.5%	97.9%	97.9%	98.6%	100.0%
(24) 238120	Structural Steel and Precast Concrete Contractors	80.5%	90.2%	96.3%	96.3%	96.3%	98.8%	100.0%
(25) 238130	Framing Contractors	86.0%	93.0%	97.7%	97.7%	97.7%	97.7%	100.0%
(26) 238140	Masonry Contractors	86.3%	97.3%	98.6%	98.6%	100.0%	100.0%	100.0%
(27) 238150	Glass and Glazing Contractors	89.1%	93.3%	95.0%	96.6%	99.2%	100.0%	100.0%
(28) 238160	Roofing Contractors	88.7%	94.5%	96.9%	97.6%	98.2%	98.7%	100.0%
(29) 238170	Siding Contractors	95.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
(30) 238190	Other Foundation, Structure, and Building Exterior Contractors	77.9%	87.8%	91.7%	93.4%	95.0%	96.1%	100.0%
(31) 2382	Building Equipment Contractors	80.5%	88.7%	92.1%	94.5%	96.0%	97.1%	100.0%
(32) 238210	Electrical Contractors and Other Wiring Installation Contractors	80.5%	88.4%	90.8%	93.4%	95.2%	96.3%	100.0%
(33) 238220	Plumbing, Heating, and Air-Conditioning Contractors	79.9%	88.7%	93.0%	95.5%	96.9%	97.9%	100.0%
(34) 238290	Other Building Equipment Contractors	82.9%	90.3%	93.8%	95.4%	96.5%	96.8%	100.0%
(35) 2383	Building Finishing Contractors	88.1%	93.1%	95.8%	96.6%	97.4%	97.7%	100.0%
(36) 238310	Drywall and Insulation Contractors	83.0%	92.0%	94.3%	95.5%	96.6%	97.7%	100.0%
(37) 238320	Painting and Wall Covering Contractors	93.4%	96.9%	98.1%	98.7%	99.4%	99.4%	100.0%
(38) 238330	Flooring Contractors	90.8%	95.4%	97.6%	98.1%	98.4%	98.6%	100.0%
(39) 238340	Tile and Terrazzo Contractors	87.5%	93.8%	96.9%	96.9%	96.9%	96.9%	100.0%
(40) 238350	Finish Carpentry Contractors	91.3%	96.4%	97.1%	97.1%	97.8%	97.8%	100.0%
(41) 238390	Other Building Finishing Contractors	78.4%	84.2%	90.5%	91.9%	93.8%	94.5%	100.0%
(42) 2389	Other Specialty Trade Contractors	83.9%	91.5%	94.6%	96.3%	97.5%	98.1%	100.0%
(43) 238910	Site Preparation Contractors	88.2%	92.7%	94.4%	96.2%	97.2%	98.6%	100.0%
(44) 238990	All Other Specialty Trade Contractors	82.6%	91.1%	94.6%	96.3%	97.6%	98.0%	100.0%
(45) 23	All Construction Firms	78.0%	87.7%	91.7%	94.2%	96.0%	97.1%	100.0%

Appendix Table E.13
Construction Firms, Nationwide,
by Number of Employees,
Average Revenue per Employee,
Federal Procurement Data System 2009

(a)	(b)	(c) (d) (e) (f) (g) (h) (i) (j) (k)								
		Average Revenue per Employee by Number of Employees								
NAICS Code	Industry Sector	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000 +
(1) 236	Construction of Buildings	\$307,352	\$307,360	\$290,580	\$314,930	\$295,781	\$431,445	\$447,590	\$580,071	\$461,875
(2) 2361	Residential Building Construction	\$189,551	\$315,776	\$238,459	\$237,477	\$228,526	\$1,169,104	\$199,472	\$244,244	\$697,644
(3) 236115	New Single-Family Housing Construction (except Operative Builders)	\$294,491	\$94,148	\$230,199	\$133,355	\$200,000	\$1,275,996	\$341,667	\$154,167	\$62,976
(4) 236116	New Multifamily Housing Construction (except Operative Builders)	\$466,389	\$400,000	\$379,798	\$399,490	\$243,137		\$240,000	\$554,908	
(5) 236117	New Housing Operative Builders			\$233,333			\$1,750,000			
(6) 236118	Residential Remodelers	\$154,131	\$354,487	\$219,020	\$204,298	\$228,473	\$267,533	\$91,165	\$97,187	\$1,120,757
(7) 2362	Nonresidential Building Construction	\$322,835	\$307,044	\$293,054	\$317,394	\$298,882	\$417,260	\$461,002	\$623,604	\$454,318
(8) 236210	Industrial Building Construction	\$252,577	\$281,171	\$297,437	\$329,889	\$291,468	\$341,135	\$247,488	\$629,959	\$553,141
(9) 236220	Commercial and Institutional Building Construction	\$331,846	\$309,944	\$292,450	\$315,572	\$299,876	\$426,447	\$482,142	\$623,231	\$446,821
(10) 237	Heavy and Civil Engineering Construction	\$204,498	\$221,310	\$249,942	\$228,501	\$251,581	\$260,408	\$310,979	\$335,618	\$382,500
(11) 2371	Utility System Construction	\$183,813	\$195,629	\$198,849	\$216,190	\$256,509	\$279,216	\$224,109	\$300,523	\$356,988
(12) 237110	Water and Sewer Line and Related Structures Construction	\$176,423	\$170,454	\$184,428	\$184,315	\$214,062	\$182,809	\$241,439	\$156,789	\$249,575
(13) 237120	Oil and Gas Pipeline and Related Structures Construction	\$242,107	\$375,016	\$168,459	\$209,981	\$384,307	\$458,888	\$243,160	\$152,000	\$231,241
(14) 237130	Power and Communication Line and Related Structures Construction	\$193,906	\$215,555	\$230,039	\$268,902	\$279,990	\$340,565	\$193,352	\$397,411	\$429,293
(15) 2372	Land Subdivision	\$1,825,000			\$75,000	\$230,769	\$140,909			\$1,316,667
(16) 237210	Land Subdivision	\$1,825,000			\$75,000	\$230,769	\$140,909			\$1,316,667
(17) 2373	Highway, Street, and Bridge Construction	\$187,673	\$204,015	\$265,431	\$208,080	\$242,999	\$230,471	\$226,439	\$491,486	\$348,253
(18) 237310	Highway, Street, and Bridge Construction	\$187,673	\$204,015	\$265,431	\$208,080	\$242,999	\$230,471	\$226,439	\$491,486	\$348,253
(19) 2379	Other Heavy and Civil Engineering Construction	\$229,841	\$262,438	\$286,425	\$253,034	\$256,136	\$274,013	\$421,514	\$270,919	\$403,180
(20) 237990	Other Heavy and Civil Engineering Construction	\$229,841	\$262,438	\$286,425	\$253,034	\$256,136	\$274,013	\$421,514	\$270,919	\$403,180
(21) 238	Specialty Trade Contractors	\$197,762	\$192,847	\$205,854	\$189,607	\$189,784	\$199,651	\$258,316	\$307,391	\$338,551
(22) 2381	Foundation, Structure, and Building Exterior Contractors	\$184,419	\$179,245	\$200,123	\$163,260	\$174,436	\$189,871	\$218,209	\$456,658	\$430,576
(23) 238110	Poured Concrete Foundation and Structure Contractors	\$204,474	\$283,380	\$143,951	\$170,922	\$240,043	\$183,289	\$99,286	\$142,996	\$169,694
(24) 238120	Structural Steel and Precast Concrete Contractors	\$238,439	\$172,652	\$228,635	\$159,618	\$158,961	\$244,368	\$92,634	\$554,987	\$149,574
(25) 238130	Framing Contractors	\$234,480	\$208,366	\$236,457	\$231,668	\$117,063	\$123,105	\$86,394		\$188,889
(26) 238140	Masonry Contractors	\$144,995	\$139,940	\$242,067	\$147,120	\$143,631	\$128,610	\$72,304		\$138,333
(27) 238150	Glass and Glazing Contractors	\$125,337	\$146,571	\$182,619	\$167,834	\$171,388	\$268,095	\$491,923		\$148,916
(28) 238160	Roofing Contractors	\$211,467	\$191,551	\$181,095	\$142,077	\$149,461	\$182,742	\$230,870		\$586,648
(29) 238170	Siding Contractors	\$63,988	\$104,538	\$257,143	\$129,444	\$103,770				
(30) 238190	Other Foundation, Structure, and Building Exterior Contractors	\$164,957	\$138,985	\$273,389	\$215,335	\$246,154	\$187,595	\$287,348	\$600,213	\$580,583
(31) 2382	Building Equipment Contractors	\$205,984	\$188,676	\$192,480	\$187,724	\$184,569	\$194,866	\$283,069	\$309,305	\$323,745
(32) 238210	Electrical Contractors and Other Wiring Installation Contractors	\$182,976	\$163,553	\$194,154	\$181,652	\$171,432	\$215,181	\$319,622	\$295,163	\$334,173
(33) 238220	Plumbing, Heating, and Air-Conditioning Contractors	\$229,017	\$205,118	\$184,802	\$197,261	\$201,352	\$186,848	\$262,827	\$326,456	\$297,937
(34) 238290	Other Building Equipment Contractors	\$238,039	\$239,740	\$213,067	\$171,993	\$172,769	\$140,660	\$167,982	\$286,023	\$342,450
(35) 2383	Building Finishing Contractors	\$233,561	\$193,122	\$224,093	\$196,818	\$218,977	\$181,393	\$243,402	\$297,474	\$255,167
(36) 238310	Drywall and Insulation Contractors	\$346,537	\$167,404	\$115,241	\$397,959	\$133,584	\$140,215	\$209,028	\$455,406	\$402,075
(37) 238320	Painting and Wall Covering Contractors	\$158,471	\$141,485	\$169,429	\$121,760	\$170,038	\$132,172			\$101,117
(38) 238330	Flooring Contractors	\$282,042	\$227,506	\$274,478	\$194,152	\$234,410	\$228,370	\$244,444	\$188,602	\$147,056
(39) 238340	Tile and Terrazzo Contractors	\$278,833	\$120,556	\$194,875	\$231,936	\$79,722	\$201,230			\$284,553
(40) 238350	Finish Carpentry Contractors	\$220,952	\$129,662	\$157,711	\$185,909	\$203,790	\$196,308		\$357,286	\$538,910
(41) 238390	Other Building Finishing Contractors	\$232,134	\$252,338	\$259,008	\$218,471	\$289,481	\$223,614	\$256,162		\$268,367
(42) 2389	Other Specialty Trade Contractors	\$165,359	\$208,913	\$226,171	\$205,443	\$196,839	\$223,765	\$213,036	\$265,979	\$407,325
(43) 238910	Site Preparation Contractors	\$208,642	\$204,462	\$217,481	\$158,465	\$238,704	\$208,024	\$237,540	\$340,641	\$622,724
(44) 238990	All Other Specialty Trade Contractors	\$149,304	\$210,099	\$228,577	\$219,209	\$189,749	\$226,485	\$208,660	\$244,647	\$353,475
(45) 23	All Construction Firms	\$220,127	\$223,388	\$235,262	\$228,960	\$231,234	\$282,059	\$330,378	\$391,977	\$383,173

Appendix Table E.14
Construction Firms, Nationwide,
by Average Firm Revenue,
Average Revenue per Employee,
Federal Procurement Data System 2009

(a)	(b)	Average Revenue per Employee by Average Firm Revenue													
		(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
NAICS Code	Industry Sector	<\$10,000	\$10,000- \$20,000	\$20,000- \$30,000	\$30,000- \$40,000	\$40,000- \$50,000	\$50,000- \$75,000	\$75,000- \$100,000	\$100,000- \$150,000	\$150,000- \$200,000	\$200,000- \$250,000	\$250,000- \$500,000	\$500,000- \$750,000	\$750,000- \$1,000,000	\$1,000,000- \$2,000,000
(1) 236	Construction of Buildings	\$6,163	\$15,051	\$19,506	\$17,626	\$23,528	\$36,144	\$49,939	\$67,202	\$87,258	\$103,297	\$120,327	\$141,605	\$180,597	\$249,768
(2) 2361	Residential Building Construction	\$6,823	\$20,000	\$19,167	\$19,583	\$25,812	\$50,433	\$83,333	\$88,920	\$103,192	\$85,161	\$133,273	\$140,837	\$162,747	\$196,420
(3) 236115	New Single-Family Housing Construction (except Operative Builders)	\$7,227				\$16,667		\$100,000				\$56,667	\$156,205	\$382,167	\$160,353
(4) 236116	New Multifamily Housing Construction (except Operative Builders)								\$45,000				\$187,500		\$208,893
(5) 236117	New Housing Operative Builders														
(6) 236118	Residential Remodelers	\$6,580	\$20,000	\$19,167	\$19,583	\$28,861	\$50,433	\$75,000	\$97,704	\$103,192	\$85,161	\$149,688	\$128,430	\$89,607	\$211,336
(7) 2362	Nonresidential Building Construction	\$5,833	\$14,601	\$19,574	\$16,508	\$22,919	\$33,827	\$46,229	\$64,956	\$84,390	\$106,436	\$119,358	\$141,648	\$181,315	\$252,863
(8) 236210	Industrial Building Construction	\$5,000	\$13,300	\$30,000	\$13,333	\$50,000	\$40,954	\$48,700	\$53,125	\$84,705	\$127,982	\$139,808	\$120,684	\$184,367	\$228,238
(9) 236220	Commercial and Institutional Building Construction	\$5,952	\$14,890	\$18,829	\$17,037	\$18,752	\$32,963	\$45,920	\$66,072	\$84,339	\$104,641	\$116,712	\$144,670	\$180,896	\$256,095
(10) 237	Heavy and Civil Engineering Construction	\$5,573	\$11,513	\$20,200	\$28,382	\$28,361	\$39,886	\$53,498	\$65,230	\$86,750	\$102,018	\$138,383	\$155,158	\$147,161	\$186,356
(11) 2371	Utility System Construction	\$5,000	\$7,500	\$21,333	\$29,067	\$18,500	\$41,919	\$48,408	\$71,211	\$92,841	\$103,001	\$139,901	\$154,632	\$138,736	\$168,463
(12) 237110	Water and Sewer Line and Related Structures Construction			\$21,333	\$34,850	\$11,250	\$42,143	\$48,769	\$73,064	\$87,067	\$116,354	\$149,150	\$157,336	\$145,138	\$172,207
(13) 237120	Oil and Gas Pipeline and Related Structures Construction						\$15,000	\$100,000	\$125,000			\$89,390	\$141,667	\$98,316	\$177,067
(14) 237130	Power and Communication Line and Related Structures Construction	\$5,000	\$7,500		\$17,500	\$23,333	\$67,272	\$20,985	\$55,635	\$120,268	\$69,620	\$114,094	\$151,922	\$135,795	\$157,913
(15) 2372	Land Subdivision														\$950,000
(16) 237210	Land Subdivision														\$950,000
(17) 2373	Highway, Street, and Bridge Construction	\$5,283	\$12,739	\$24,800	\$33,960	\$32,417	\$39,326	\$57,940	\$68,215	\$92,092	\$98,604	\$138,362	\$173,716	\$146,401	\$167,606
(18) 237310	Highway, Street, and Bridge Construction	\$5,283	\$12,739	\$24,800	\$33,960	\$32,417	\$39,326	\$57,940	\$68,215	\$92,092	\$98,604	\$138,362	\$173,716	\$146,401	\$167,606
(19) 2379	Other Heavy and Civil Engineering Construction	\$6,005	\$11,581	\$16,429	\$19,500	\$29,612	\$39,105	\$52,559	\$55,979	\$75,782	\$107,318	\$137,153	\$132,883	\$158,297	\$204,634
(20) 237990	Other Heavy and Civil Engineering Construction	\$6,005	\$11,581	\$16,429	\$19,500	\$29,612	\$39,105	\$52,559	\$55,979	\$75,782	\$107,318	\$137,153	\$132,883	\$158,297	\$204,634
(21) 238	Specialty Trade Contractors	\$5,930	\$13,646	\$20,215	\$22,573	\$33,377	\$39,162	\$51,617	\$69,905	\$80,584	\$100,689	\$123,670	\$161,343	\$161,888	\$195,169
(22) 2381	Foundation, Structure, and Building Exterior Contractors	\$4,666	\$11,174	\$24,324	\$24,525	\$31,318	\$29,435	\$46,881	\$83,214	\$68,535	\$84,296	\$123,240	\$183,532	\$138,016	\$179,961
(23) 238110	Poured Concrete Foundation and Structure Contractors	\$2,495	\$7,500	\$25,000		\$48,333	\$5,315	\$44,667	\$97,500	\$65,000	\$108,443	\$113,360	\$165,789	\$92,536	\$115,373
(24) 238120	Structural Steel and Precast Concrete Contractors							\$24,900	\$30,045	\$53,333		\$124,150	\$87,964	\$145,807	\$209,501
(25) 238130	Framing Contractors				\$40,000	\$50,000		\$26,667	\$97,500	\$80,000	\$125,000	\$160,289	\$298,833	\$234,389	\$279,025
(26) 238140	Masonry Contractors	\$5,000			\$4,561	\$50,000		\$65,000	\$72,762	\$60,000	\$98,560	\$132,541	\$147,917	\$158,032	\$161,942
(27) 238150	Glass and Glazing Contractors	\$10,000		\$25,000	\$36,650	\$10,000	\$75,000	\$12,615	\$118,125	\$73,917	\$69,236	\$151,165	\$100,857	\$124,739	\$152,611
(28) 238160	Roofing Contractors	\$2,750	\$13,624	\$28,333	\$19,467	\$26,319	\$31,594	\$45,530	\$88,381	\$64,375	\$72,466	\$110,513	\$207,815	\$140,645	\$202,022
(29) 238170	Siding Contractors			\$19,533	\$25,317	\$19,583	\$11,441		\$125,000	\$66,667	\$50,000	\$98,667	\$187,500		\$232,143
(30) 238190	Other Foundation, Structure, and Building Exterior Contractors	\$4,778		\$23,375	\$27,500	\$24,500	\$35,000	\$58,076	\$59,732	\$74,818	\$108,812	\$129,343	\$213,685	\$131,224	\$148,631
(31) 2382	Building Equipment Contractors	\$5,143	\$13,269	\$17,504	\$18,210	\$35,851	\$36,940	\$48,096	\$73,905	\$87,066	\$96,510	\$124,099	\$141,603	\$161,331	\$190,393
(32) 238210	Electrical Contractors and Other Wiring Installation Contractors	\$5,295	\$12,713	\$17,507	\$16,879	\$33,646	\$36,439	\$46,922	\$74,839	\$79,616	\$100,069	\$120,783	\$122,803	\$189,691	\$181,630
(33) 238220	Plumbing, Heating, and Air-Conditioning Contractors	\$4,889	\$13,450	\$17,142	\$22,630	\$39,688	\$40,835	\$52,449	\$72,998	\$95,905	\$103,276	\$132,962	\$158,046	\$141,426	\$188,441
(34) 238290	Other Building Equipment Contractors		\$14,583	\$18,750	\$11,818	\$40,450	\$23,269	\$31,544	\$71,960	\$100,256	\$62,614	\$109,520	\$172,930	\$131,565	\$229,082
(35) 2383	Building Finishing Contractors	\$6,439	\$14,342	\$19,880	\$22,040	\$30,305	\$43,503	\$49,064	\$58,324	\$55,456	\$111,529	\$124,704	\$188,047	\$198,764	\$249,587
(36) 238310	Drywall and Insulation Contractors				\$28,650		\$35,000	\$58,411	\$85,000	\$152,667	\$105,399	\$219,167	\$185,007	\$344,799	
(37) 238320	Painting and Wall Covering Contractors	\$5,000	\$14,932	\$27,902	\$16,373	\$28,744	\$51,230	\$51,240	\$61,662	\$47,238	\$106,183	\$126,158	\$94,174	\$147,261	\$190,296
(38) 238330	Flooring Contractors	\$10,000	\$16,167	\$3,948	\$38,100	\$27,140	\$33,167	\$44,903	\$63,084	\$69,028	\$118,685	\$123,882	\$252,045	\$221,364	\$248,125
(39) 238340	Tile and Terrazzo Contractors			\$6,250				\$64,333	\$31,250	\$36,786		\$145,158	\$61,111	\$227,778	\$163,580
(40) 238350	Finish Carpentry Contractors	\$7,500	\$8,333	\$20,000	\$33,500	\$41,500	\$41,893	\$47,333	\$52,031	\$90,372	\$116,071	\$123,365	\$360,000	\$196,444	\$345,863
(41) 238390	Other Building Finishing Contractors	\$6,457		\$18,500	\$35,000	\$41,000	\$34,413	\$48,333	\$51,694	\$51,588	\$85,867	\$130,643	\$153,679	\$200,298	\$243,180
(42) 2389	Other Specialty Trade Contractors	\$6,830	\$14,375	\$21,222	\$25,738	\$35,152	\$42,882	\$59,855	\$66,950	\$91,340	\$110,777	\$122,284	\$165,642	\$150,102	\$179,798
(43) 238910	Site Preparation Contractors	\$6,552	\$13,167	\$20,500	\$26,458	\$27,778	\$50,387	\$50,885	\$74,550	\$93,070	\$119,139	\$146,877	\$166,199	\$138,595	\$199,543
(44) 238990	All Other Specialty Trade Contractors	\$7,138	\$14,536	\$21,403	\$25,498	\$38,840	\$41,492	\$62,563	\$64,276	\$90,789	\$107,560	\$114,889	\$165,442	\$154,058	\$174,569
(45) 23	All Construction Firms	\$5,957	\$13,618	\$20,071	\$22,833	\$31,157	\$38,607	\$51,764	\$68,622	\$82,838	\$101,455	\$125,716	\$156,397	\$162,744	\$205,719

Appendix Table E.14
Construction Firms, Nationwide,
by Average Firm Revenue,
Average Revenue per Employee,
Federal Procurement Data System 2009

(a)	(b)	(c) (d) (e) (f) (g) (h) (i) (j)							
		Average Revenue per Employee by Average Firm Revenue							
NAICS Code	Industry Sector	\$2,000,000- \$5,000,000	\$5,000,000- \$10,000,000	\$10,000,000- \$25,000,000	\$25,000,000- \$50,000,000	\$50,000,000- \$100,000,000	\$100,000,000- \$250,000,000	\$250,000,000- \$500,000,000	> \$500,000,000
(1) 236	Construction of Buildings	\$317,206	\$382,655	\$427,010	\$473,256	\$555,179	\$673,022	\$812,469	\$813,026
(2) 2361	Residential Building Construction	\$405,036	\$461,953	\$529,633	\$247,867	\$300,589	\$467,720	\$1,283,579	\$1,053,196
(3) 236115	New Single-Family Housing Construction (except Operative Builders)	\$635,417	\$321,641		\$106,667	\$257,806	\$654,928	\$1,050,369	
(4) 236116	New Multifamily Housing Construction (except Operative Builders)	\$504,167	\$405,083	\$578,758		\$240,000	\$259,301		\$850,515
(5) 236117	New Housing Operative Builders	\$233,333						\$1,750,000	
(6) 236118	Residential Remodelers	\$333,390	\$510,560	\$505,070	\$276,107	\$363,569	\$114,514		\$1,120,757
(7) 2362	Nonresidential Building Construction	\$313,630	\$379,829	\$425,077	\$480,727	\$572,151	\$684,821	\$789,300	\$805,402
(8) 236210	Industrial Building Construction	\$263,654	\$360,621	\$379,360	\$482,273	\$701,627	\$831,754	\$593,484	\$964,432
(9) 236220	Commercial and Institutional Building Construction	\$319,344	\$382,735	\$431,765	\$480,535	\$557,000	\$675,862	\$806,783	\$794,620
(10) 237	Heavy and Civil Engineering Construction	\$273,353	\$289,252	\$327,001	\$382,372	\$381,149	\$384,616	\$469,003	\$554,252
(11) 2371	Utility System Construction	\$245,684	\$245,370	\$306,374	\$387,330	\$430,281	\$382,215	\$463,408	\$457,842
(12) 237110	Water and Sewer Line and Related Structures Construction	\$225,559	\$244,758	\$264,973	\$378,836	\$331,206	\$290,883	\$244,746	\$306,216
(13) 237120	Oil and Gas Pipeline and Related Structures Construction	\$381,599	\$317,120	\$266,721	\$207,908	\$458,983	\$173,016	\$880,018	\$401,021
(14) 237130	Power and Communication Line and Related Structures Construction	\$244,282	\$231,841	\$400,190	\$448,012	\$535,426	\$514,431	\$419,099	\$497,851
(15) 2372	Land Subdivision			\$185,839					\$1,316,667
(16) 237210	Land Subdivision			\$185,839					\$1,316,667
(17) 2373	Highway, Street, and Bridge Construction	\$260,069	\$294,537	\$320,997	\$376,328	\$291,494	\$356,128	\$300,517	\$521,205
(18) 237310	Highway, Street, and Bridge Construction	\$260,069	\$294,537	\$320,997	\$376,328	\$291,494	\$356,128	\$300,517	\$521,205
(19) 2379	Other Heavy and Civil Engineering Construction	\$306,961	\$310,119	\$340,635	\$385,112	\$405,121	\$403,697	\$629,614	\$657,978
(20) 237990	Other Heavy and Civil Engineering Construction	\$306,961	\$310,119	\$340,635	\$385,112	\$405,121	\$403,697	\$629,614	\$657,978
(21) 238	Specialty Trade Contractors	\$234,515	\$260,885	\$315,989	\$337,862	\$361,352	\$369,339	\$375,104	\$483,683
(22) 2381	Foundation, Structure, and Building Exterior Contractors	\$247,536	\$260,333	\$291,883	\$286,939	\$293,995	\$365,720	\$390,429	\$602,090
(23) 238110	Poured Concrete Foundation and Structure Contractors	\$349,515	\$239,662	\$536,720	\$378,937	\$142,996		\$48,369	\$230,357
(24) 238120	Structural Steel and Precast Concrete Contractors	\$231,686	\$251,680	\$304,951	\$288,314			\$554,987	\$149,574
(25) 238130	Framing Contractors	\$304,992	\$281,811	\$286,716	\$108,197				\$188,889
(26) 238140	Masonry Contractors	\$234,005	\$255,150	\$143,332	\$78,028		\$138,333		
(27) 238150	Glass and Glazing Contractors	\$185,593	\$255,573	\$229,389	\$310,000	\$357,143	\$403,531	\$200,000	
(28) 238160	Roofing Contractors	\$239,515	\$240,977	\$249,614	\$205,755	\$313,030	\$429,215	\$148,058	\$762,084
(29) 238170	Siding Contractors	\$180,524	\$66,226	\$141,315					
(30) 238190	Other Foundation, Structure, and Building Exterior Contractors	\$251,869	\$338,018	\$321,528	\$398,950	\$333,526	\$361,376	\$734,486	\$717,692
(31) 2382	Building Equipment Contractors	\$210,311	\$234,837	\$276,182	\$319,379	\$331,488	\$382,706	\$397,422	\$478,042
(32) 238210	Electrical Contractors and Other Wiring Installation Contractors	\$194,966	\$235,615	\$257,449	\$319,319	\$346,548	\$404,304	\$418,067	\$472,603
(33) 238220	Plumbing, Heating, and Air-Conditioning Contractors	\$215,603	\$236,461	\$282,987	\$324,595	\$347,839	\$377,501	\$385,475	\$493,773
(34) 238290	Other Building Equipment Contractors	\$242,357	\$225,853	\$333,258	\$294,180	\$127,964	\$259,783	\$158,277	\$465,910
(35) 2383	Building Finishing Contractors	\$315,402	\$308,237	\$430,120	\$452,381	\$780,386	\$284,535	\$257,343	\$334,016
(36) 238310	Drywall and Insulation Contractors	\$280,595	\$334,101	\$270,813	\$234,643	\$2,753,103	\$508,108	\$455,406	\$402,075
(37) 238320	Painting and Wall Covering Contractors	\$231,547	\$355,637	\$227,350	\$849,671	\$354,984	\$52,231		\$237,209
(38) 238330	Flooring Contractors	\$360,936	\$339,232	\$686,281	\$349,878	\$827,327	\$244,444	\$305,882	\$147,056
(39) 238340	Tile and Terrazzo Contractors	\$369,001	\$329,227	\$253,765	\$269,930				\$284,553
(40) 238350	Finish Carpentry Contractors	\$321,171	\$201,125	\$356,717	\$291,667		\$357,286		\$538,910
(41) 238390	Other Building Finishing Contractors	\$335,569	\$268,964	\$431,167	\$452,940	\$476,438	\$326,210	\$134,042	\$362,488
(42) 2389	Other Specialty Trade Contractors	\$238,384	\$300,542	\$371,807	\$342,542	\$356,169	\$371,498	\$323,598	\$566,111
(43) 238910	Site Preparation Contractors	\$282,590	\$374,425	\$391,930	\$349,511	\$396,855	\$227,503	\$313,279	\$947,195
(44) 238990	All Other Specialty Trade Contractors	\$222,421	\$287,818	\$368,772	\$341,604	\$343,149	\$400,297	\$335,980	\$489,894
(45) 23	All Construction Firms	\$261,302	\$298,210	\$356,650	\$391,694	\$427,171	\$478,335	\$565,222	\$600,472

Appendix Table E.15
Construction Employees, Nationwide,
by Number of Employees,
Federal Procurement Data System 2009

(a)	(b)	(c)	(d)	(e) (f) (g) (h) (i) (j)					
				Employee Counts by Number of Employees					
				1-4		5-9		10-19	
NAICS Code	Industry Sector	Total Employees		N	%	N	%	N	%
(1) 236	Construction of Buildings	2,295,028	100.0%	1,572	0.1%	3,473	0.2%	8,499	0.4%
(2) 2361	Residential Building Construction	24,082	100.0%	156	0.6%	118	0.5%	386	1.6%
(3) 236115	New Single-Family Housing Construction (except Operative Builders)	8,359	100.0%	26	0.3%	20	0.2%	73	0.9%
(4) 236116	New Multifamily Housing Construction (except Operative Builders)	2,249	100.0%	10	0.4%	5	0.2%	36	1.6%
(5) 236117	New Housing Operative Builders	215	100.0%		0.0%		0.0%	15	7.0%
(6) 236118	Residential Remodelers	13,258	100.0%	120	0.9%	93	0.7%	262	2.0%
(7) 2362	Nonresidential Building Construction	2,270,946	100.0%	1,415	0.1%	3,355	0.1%	8,113	0.4%
(8) 236210	Industrial Building Construction	82,382	100.0%	159	0.2%	341	0.4%	958	1.2%
(9) 236220	Commercial and Institutional Building Construction	2,188,564	100.0%	1,256	0.1%	3,014	0.1%	7,155	0.3%
(10) 237	Heavy and Civil Engineering Construction	2,541,989	100.0%	1,576	0.1%	2,948	0.1%	6,615	0.3%
(11) 2371	Utility System Construction	1,342,863	100.0%	447	0.0%	882	0.1%	2,254	0.2%
(12) 237110	Water and Sewer Line and Related Structures Construction	372,717	100.0%	334	0.1%	624	0.2%	1,279	0.3%
(13) 237120	Oil and Gas Pipeline and Related Structures Construction	54,896	100.0%	37	0.1%	59	0.1%	189	0.3%
(14) 237130	Power and Communication Line and Related Structures Construction	915,250	100.0%	76	0.0%	199	0.0%	785	0.1%
(15) 2372	Land Subdivision	51,696	100.0%	1	0.0%		0.0%		0.0%
(16) 237210	Land Subdivision	51,696	100.0%	1	0.0%		0.0%		0.0%
(17) 2373	Highway, Street, and Bridge Construction	691,770	100.0%	534	0.1%	1,058	0.2%	2,078	0.3%
(18) 237310	Highway, Street, and Bridge Construction	691,770	100.0%	534	0.1%	1,058	0.2%	2,078	0.3%
(19) 2379	Other Heavy and Civil Engineering Construction	455,660	100.0%	594	0.1%	1,007	0.2%	2,283	0.5%
(20) 237990	Other Heavy and Civil Engineering Construction	455,660	100.0%	594	0.1%	1,007	0.2%	2,283	0.5%
(21) 238	Specialty Trade Contractors	7,659,140	100.0%	4,797	0.1%	9,323	0.1%	19,253	0.3%
(22) 2381	Foundation, Structure, and Building Exterior Contractors	188,709	100.0%	670	0.4%	1,212	0.6%	2,632	1.4%
(23) 238110	Poured Concrete Foundation and Structure Contractors	18,470	100.0%	112	0.6%	123	0.7%	454	2.5%
(24) 238120	Structural Steel and Precast Concrete Contractors	9,278	100.0%	38	0.4%	114	1.2%	237	2.6%
(25) 238130	Framing Contractors	19,157	100.0%	38	0.2%	46	0.2%	66	0.3%
(26) 238140	Masonry Contractors	3,463	100.0%	52	1.5%	91	2.6%	138	4.0%
(27) 238150	Glass and Glazing Contractors	8,642	100.0%	71	0.8%	142	1.6%	407	4.7%
(28) 238160	Roofing Contractors	95,422	100.0%	212	0.2%	474	0.5%	838	0.9%
(29) 238170	Siding Contractors	383	100.0%	26	6.8%	33	8.6%	24	6.3%
(30) 238190	Other Foundation, Structure, and Building Exterior Contractors	33,893	100.0%	121	0.4%	188	0.6%	469	1.4%
(31) 2382	Building Equipment Contractors	5,055,852	100.0%	1,898	0.0%	4,481	0.1%	9,484	0.2%
(32) 238210	Electrical Contractors and Other Wiring Installation Contractors	3,447,927	100.0%	975	0.0%	2,142	0.1%	4,328	0.1%
(33) 238220	Plumbing, Heating, and Air-Conditioning Contractors	1,080,118	100.0%	720	0.1%	1,854	0.2%	4,029	0.4%
(34) 238290	Other Building Equipment Contractors	527,807	100.0%	203	0.0%	485	0.1%	1,127	0.2%
(35) 2383	Building Finishing Contractors	890,221	100.0%	979	0.1%	1,427	0.2%	2,802	0.3%
(36) 238310	Drywall and Insulation Contractors	160,043	100.0%	75	0.0%	92	0.1%	168	0.1%
(37) 238320	Painting and Wall Covering Contractors	91,040	100.0%	270	0.3%	401	0.4%	658	0.7%
(38) 238330	Flooring Contractors	143,531	100.0%	317	0.2%	480	0.3%	935	0.7%
(39) 238340	Tile and Terrazzo Contractors	13,036	100.0%	32	0.2%	46	0.4%	61	0.5%
(40) 238350	Finish Carpentry Contractors	9,734	100.0%	126	1.3%	125	1.3%	251	2.6%
(41) 238390	Other Building Finishing Contractors	472,837	100.0%	159	0.0%	283	0.1%	729	0.2%
(42) 2389	Other Specialty Trade Contractors	1,524,358	100.0%	1,251	0.1%	2,203	0.1%	4,335	0.3%
(43) 238910	Site Preparation Contractors	729,202	100.0%	332	0.0%	450	0.1%	921	0.1%
(44) 238990	All Other Specialty Trade Contractors	795,156	100.0%	919	0.1%	1,753	0.2%	3,414	0.4%
(45) 23	All Construction Firms	12,496,156	100.0%	7,944	0.1%	15,743	0.1%	34,367	0.3%

Appendix Table E.15
Construction Employees, Nationwide,
by Number of Employees,
Federal Procurement Data System 2009

	(a)	(b)	(c)	(d)	(k)	(l)	(m)	(n)	(o)	(p)
					Employee Counts by Number of Employees					
	NAICS Code	Industry Sector	Total Employees		20-49		50-99		100-249	
			N	%	N	%	N	%	N	%
(1)	236	Construction of Buildings	2,295,028	100.0%	22,876	1.0%	24,301	1.1%	39,739	1.7%
(2)	2361	Residential Building Construction	24,082	100.0%	666	2.8%	1,063	4.4%	735	3.1%
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	8,359	100.0%	85	1.0%	50	0.6%	410	4.9%
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	2,249	100.0%	125	5.6%	160	7.1%		0.0%
(5)	236117	New Housing Operative Builders	215	100.0%		0.0%		0.0%	200	93.0%
(6)	236118	Residential Remodelers	13,258	100.0%	456	3.4%	853	6.4%	125	0.9%
(7)	2362	Nonresidential Building Construction	2,270,946	100.0%	22,210	1.0%	23,238	1.0%	39,004	1.7%
(8)	236210	Industrial Building Construction	82,382	100.0%	2,904	3.5%	2,818	3.4%	4,320	5.2%
(9)	236220	Commercial and Institutional Building Construction	2,188,564	100.0%	19,306	0.9%	20,420	0.9%	34,685	1.6%
(10)	237	Heavy and Civil Engineering Construction	2,541,989	100.0%	17,782	0.7%	20,548	0.8%	29,863	1.2%
(11)	2371	Utility System Construction	1,342,863	100.0%	4,498	0.3%	4,503	0.3%	6,772	0.5%
(12)	237110	Water and Sewer Line and Related Structures Construction	372,717	100.0%	2,531	0.7%	2,175	0.6%	3,159	0.8%
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	54,896	100.0%	366	0.7%	452	0.8%	1,091	2.0%
(14)	237130	Power and Communication Line and Related Structures Construction	915,250	100.0%	1,601	0.2%	1,876	0.2%	2,522	0.3%
(15)	2372	Land Subdivision	51,696	100.0%	20	0.0%	65	0.1%	110	0.2%
(16)	237210	Land Subdivision	51,696	100.0%	20	0.0%	65	0.1%	110	0.2%
(17)	2373	Highway, Street, and Bridge Construction	691,770	100.0%	5,987	0.9%	7,028	1.0%	9,435	1.4%
(18)	237310	Highway, Street, and Bridge Construction	691,770	100.0%	5,987	0.9%	7,028	1.0%	9,435	1.4%
(19)	2379	Other Heavy and Civil Engineering Construction	455,660	100.0%	7,277	1.6%	8,952	2.0%	13,546	3.0%
(20)	237990	Other Heavy and Civil Engineering Construction	455,660	100.0%	7,277	1.6%	8,952	2.0%	13,546	3.0%
(21)	238	Specialty Trade Contractors	7,659,140	100.0%	49,439	0.6%	47,854	0.6%	62,879	0.8%
(22)	2381	Foundation, Structure, and Building Exterior Contractors	188,709	100.0%	6,141	3.3%	6,246	3.3%	5,507	2.9%
(23)	238110	Poured Concrete Foundation and Structure Contractors	18,470	100.0%	803	4.3%	590	3.2%	220	1.2%
(24)	238120	Structural Steel and Precast Concrete Contractors	9,278	100.0%	551	5.9%	521	5.6%	693	7.5%
(25)	238130	Framing Contractors	19,157	100.0%	257	1.3%	110	0.6%	300	1.6%
(26)	238140	Masonry Contractors	3,463	100.0%	396	11.4%	384	11.1%	500	14.4%
(27)	238150	Glass and Glazing Contractors	8,642	100.0%	654	7.6%	618	7.2%	425	4.9%
(28)	238160	Roofing Contractors	95,422	100.0%	2,648	2.8%	2,711	2.8%	1,973	2.1%
(29)	238170	Siding Contractors	383	100.0%	105	27.4%	195	50.9%		0.0%
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	33,893	100.0%	727	2.1%	1,117	3.3%	1,396	4.1%
(31)	2382	Building Equipment Contractors	5,055,852	100.0%	26,941	0.5%	26,683	0.5%	38,253	0.8%
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	3,447,927	100.0%	11,708	0.3%	12,121	0.4%	16,827	0.5%
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	1,080,118	100.0%	12,255	1.1%	11,712	1.1%	18,026	1.7%
(34)	238290	Other Building Equipment Contractors	527,807	100.0%	2,978	0.6%	2,851	0.5%	3,401	0.6%
(35)	2383	Building Finishing Contractors	890,221	100.0%	5,719	0.6%	5,482	0.6%	5,187	0.6%
(36)	238310	Drywall and Insulation Contractors	160,043	100.0%	432	0.3%	491	0.3%	900	0.6%
(37)	238320	Painting and Wall Covering Contractors	91,040	100.0%	1,463	1.6%	1,322	1.5%	1,549	1.7%
(38)	238330	Flooring Contractors	143,531	100.0%	1,606	1.1%	1,510	1.1%	736	0.5%
(39)	238340	Tile and Terrazzo Contractors	13,036	100.0%	118	0.9%	170	1.3%	309	2.4%
(40)	238350	Finish Carpentry Contractors	9,734	100.0%	755	7.8%	485	5.0%	350	3.6%
(41)	238390	Other Building Finishing Contractors	472,837	100.0%	1,344	0.3%	1,505	0.3%	1,343	0.3%
(42)	2389	Other Specialty Trade Contractors	1,524,358	100.0%	10,639	0.7%	9,443	0.6%	13,932	0.9%
(43)	238910	Site Preparation Contractors	729,202	100.0%	2,374	0.3%	1,304	0.2%	1,915	0.3%
(44)	238990	All Other Specialty Trade Contractors	795,156	100.0%	8,265	1.0%	8,139	1.0%	12,017	1.5%
(45)	23	All Construction Firms	12,496,156	100.0%	90,097	0.7%	92,702	0.7%	132,481	1.1%

Appendix Table E.15
Construction Employees, Nationwide,
by Number of Employees,
Federal Procurement Data System 2009

	(a)	(b)	(c)	(d)	(q)	(r)	(s)	(t)	(u)	(v)		
	NAICS Code		Industry Sector		Total Employees		Employee Counts by Number of Employees					
					250-499		500-999		1,000 +			
			N	%	N	%	N	%	N	%		
(1)	236	Construction of Buildings	2,295,028	100.0%	39,674	1.7%	42,142	1.8%	2,112,753	92.1%		
(2)	2361	Residential Building Construction	24,082	100.0%	2,042	8.5%	5,039	20.9%	13,876	57.6%		
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	8,359	100.0%	750	9.0%	1,200	14.4%	5,745	68.7%		
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	2,249	100.0%	250	11.1%	1,663	73.9%		0.0%		
(5)	236117	New Housing Operative Builders	215	100.0%		0.0%		0.0%		0.0%		
(6)	236118	Residential Remodelers	13,258	100.0%	1,042	7.9%	2,176	16.4%	8,131	61.3%		
(7)	2362	Nonresidential Building Construction	2,270,946	100.0%	37,632	1.7%	37,103	1.6%	2,098,877	92.4%		
(8)	236210	Industrial Building Construction	82,382	100.0%	3,560	4.3%	1,597	1.9%	65,726	79.8%		
(9)	236220	Commercial and Institutional Building Construction	2,188,564	100.0%	34,072	1.6%	35,506	1.6%	2,033,151	92.9%		
(10)	237	Heavy and Civil Engineering Construction	2,541,989	100.0%	31,978	1.3%	42,267	1.7%	2,388,413	94.0%		
(11)	2371	Utility System Construction	1,342,863	100.0%	7,290	0.5%	10,965	0.8%	1,305,254	97.2%		
(12)	237110	Water and Sewer Line and Related Structures Construction	372,717	100.0%	3,954	1.1%	2,802	0.8%	355,859	95.5%		
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	54,896	100.0%	731	1.3%	1,300	2.4%	50,672	92.3%		
(14)	237130	Power and Communication Line and Related Structures Construction	915,250	100.0%	2,605	0.3%	6,863	0.7%	898,723	98.2%		
(15)	2372	Land Subdivision	51,696	100.0%		0.0%		0.0%	51,500	99.6%		
(16)	237210	Land Subdivision	51,696	100.0%		0.0%		0.0%	51,500	99.6%		
(17)	2373	Highway, Street, and Bridge Construction	691,770	100.0%	10,535	1.5%	10,798	1.6%	644,316	93.1%		
(18)	237310	Highway, Street, and Bridge Construction	691,770	100.0%	10,535	1.5%	10,798	1.6%	644,316	93.1%		
(19)	2379	Other Heavy and Civil Engineering Construction	455,660	100.0%	14,153	3.1%	20,504	4.5%	387,343	85.0%		
(20)	237990	Other Heavy and Civil Engineering Construction	455,660	100.0%	14,153	3.1%	20,504	4.5%	387,343	85.0%		
(21)	238	Specialty Trade Contractors	7,659,140	100.0%	55,954	0.7%	65,591	0.9%	7,344,049	95.9%		
(22)	2381	Foundation, Structure, and Building Exterior Contractors	188,709	100.0%	6,495	3.4%	4,397	2.3%	155,409	82.4%		
(23)	238110	Poured Concrete Foundation and Structure Contractors	18,470	100.0%	600	3.2%	1,206	6.5%	14,363	77.8%		
(24)	238120	Structural Steel and Precast Concrete Contractors	9,278	100.0%	530	5.7%	1,300	14.0%	5,294	57.1%		
(25)	238130	Framing Contractors	19,157	100.0%	340	1.8%		0.0%	18,000	94.0%		
(26)	238140	Masonry Contractors	3,463	100.0%	702	20.3%		0.0%	1,200	34.7%		
(27)	238150	Glass and Glazing Contractors	8,642	100.0%	725	8.4%		0.0%	5,600	64.8%		
(28)	238160	Roofing Contractors	95,422	100.0%	2,318	2.4%		0.0%	84,248	88.3%		
(29)	238170	Siding Contractors	383	100.0%		0.0%		0.0%		0.0%		
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	33,893	100.0%	1,280	3.8%	1,891	5.6%	26,704	78.8%		
(31)	2382	Building Equipment Contractors	5,055,852	100.0%	34,072	0.7%	39,631	0.8%	4,874,410	96.4%		
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	3,447,927	100.0%	16,748	0.5%	14,854	0.4%	3,368,225	97.7%		
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	1,080,118	100.0%	14,327	1.3%	18,898	1.7%	998,297	92.4%		
(34)	238290	Other Building Equipment Contractors	527,807	100.0%	2,997	0.6%	5,879	1.1%	507,887	96.2%		
(35)	2383	Building Finishing Contractors	890,221	100.0%	4,343	0.5%	3,163	0.4%	861,120	96.7%		
(36)	238310	Drywall and Insulation Contractors	160,043	100.0%	1,125	0.7%	800	0.5%	155,960	97.4%		
(37)	238320	Painting and Wall Covering Contractors	91,040	100.0%		0.0%		0.0%	85,378	93.8%		
(38)	238330	Flooring Contractors	143,531	100.0%	450	0.3%	1,733	1.2%	135,763	94.6%		
(39)	238340	Tile and Terrazzo Contractors	13,036	100.0%		0.0%		0.0%	12,300	94.4%		
(40)	238350	Finish Carpentry Contractors	9,734	100.0%		0.0%	630	6.5%	7,012	72.0%		
(41)	238390	Other Building Finishing Contractors	472,837	100.0%	2,768	0.6%		0.0%	464,707	98.3%		
(42)	2389	Other Specialty Trade Contractors	1,524,358	100.0%	11,045	0.7%	18,400	1.2%	1,453,111	95.3%		
(43)	238910	Site Preparation Contractors	729,202	100.0%	1,763	0.2%	4,082	0.6%	716,061	98.2%		
(44)	238990	All Other Specialty Trade Contractors	795,156	100.0%	9,282	1.2%	14,318	1.8%	737,050	92.7%		
(45)	23	All Construction Firms	12,496,156	100.0%	127,606	1.0%	150,001	1.2%	11,845,214	94.8%		

Appendix Table E.16
Construction Employees, Nationwide,
by Number of Employees,
Cumulative Percentage,
Federal Procurement Data System 2009

(a)	(b)	(c) (d) (e) (f) (g) (h) (i) (j) (k)								
		Cumulative % of Employees by Number of Employees								
NAICS Code	Industry Sector	1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000 +
(1) 236	Construction of Buildings	0.1%	0.2%	0.6%	1.6%	2.6%	4.4%	6.1%	7.9%	100.0%
(2) 2361	Residential Building Construction	0.6%	1.1%	2.7%	5.5%	9.9%	13.0%	21.5%	42.4%	100.0%
(3) 236115	New Single-Family Housing Construction (except Operative Builders)	0.3%	0.6%	1.4%	2.4%	3.0%	7.9%	16.9%	31.3%	100.0%
(4) 236116	New Multifamily Housing Construction (except Operative Builders)	0.4%	0.7%	2.3%	7.8%	14.9%	14.9%	26.1%	100.0%	100.0%
(5) 236117	New Housing Operative Builders	0.0%	0.0%	7.0%	7.0%	7.0%	100.0%	100.0%	100.0%	100.0%
(6) 236118	Residential Remodelers	0.9%	1.6%	3.6%	7.0%	13.5%	14.4%	22.3%	38.7%	100.0%
(7) 2362	Nonresidential Building Construction	0.1%	0.2%	0.6%	1.5%	2.6%	4.3%	5.9%	7.6%	100.0%
(8) 236210	Industrial Building Construction	0.2%	0.6%	1.8%	5.3%	8.7%	14.0%	18.3%	20.2%	100.0%
(9) 236220	Commercial and Institutional Building Construction	0.1%	0.2%	0.5%	1.4%	2.3%	3.9%	5.5%	7.1%	100.0%
(10) 237	Heavy and Civil Engineering Construction	0.1%	0.2%	0.4%	1.1%	1.9%	3.1%	4.4%	6.0%	100.0%
(11) 2371	Utility System Construction	0.0%	0.1%	0.3%	0.6%	0.9%	1.4%	2.0%	2.8%	100.0%
(12) 237110	Water and Sewer Line and Related Structures Construction	0.1%	0.3%	0.6%	1.3%	1.9%	2.7%	3.8%	4.5%	100.0%
(13) 237120	Oil and Gas Pipeline and Related Structures Construction	0.1%	0.2%	0.5%	1.2%	2.0%	4.0%	5.3%	7.7%	100.0%
(14) 237130	Power and Communication Line and Related Structures Construction	0.0%	0.0%	0.1%	0.3%	0.5%	0.8%	1.1%	1.8%	100.0%
(15) 2372	Land Subdivision	0.0%	0.0%	0.0%	0.0%	0.2%	0.4%	0.4%	0.4%	100.0%
(16) 237210	Land Subdivision	0.0%	0.0%	0.0%	0.0%	0.2%	0.4%	0.4%	0.4%	100.0%
(17) 2373	Highway, Street, and Bridge Construction	0.1%	0.2%	0.5%	1.4%	2.4%	3.8%	5.3%	6.9%	100.0%
(18) 237310	Highway, Street, and Bridge Construction	0.1%	0.2%	0.5%	1.4%	2.4%	3.8%	5.3%	6.9%	100.0%
(19) 2379	Other Heavy and Civil Engineering Construction	0.1%	0.4%	0.9%	2.4%	4.4%	7.4%	10.5%	15.0%	100.0%
(20) 237990	Other Heavy and Civil Engineering Construction	0.1%	0.4%	0.9%	2.4%	4.4%	7.4%	10.5%	15.0%	100.0%
(21) 238	Specialty Trade Contractors	0.1%	0.2%	0.4%	1.1%	1.7%	2.5%	3.3%	4.1%	100.0%
(22) 2381	Foundation, Structure, and Building Exterior Contractors	0.4%	1.0%	2.4%	5.6%	9.0%	11.9%	15.3%	17.6%	100.0%
(23) 238110	Poured Concrete Foundation and Structure Contractors	0.6%	1.3%	3.7%	8.1%	11.3%	12.5%	15.7%	22.2%	100.0%
(24) 238120	Structural Steel and Precast Concrete Contractors	0.4%	1.6%	4.2%	10.1%	15.7%	23.2%	28.9%	42.9%	100.0%
(25) 238130	Framing Contractors	0.2%	0.4%	0.8%	2.1%	2.7%	4.3%	6.0%	6.0%	100.0%
(26) 238140	Masonry Contractors	1.5%	4.1%	8.1%	19.6%	30.6%	45.1%	65.3%	65.3%	100.0%
(27) 238150	Glass and Glazing Contractors	0.8%	2.5%	7.2%	14.7%	21.9%	26.8%	35.2%	35.2%	100.0%
(28) 238160	Roofing Contractors	0.2%	0.7%	1.6%	4.4%	7.2%	9.3%	11.7%	11.7%	100.0%
(29) 238170	Siding Contractors	6.8%	15.4%	21.7%	49.1%	100.0%	100.0%	100.0%	100.0%	100.0%
(30) 238190	Other Foundation, Structure, and Building Exterior Contractors	0.4%	0.9%	2.3%	4.4%	7.7%	11.9%	15.6%	21.2%	100.0%
(31) 2382	Building Equipment Contractors	0.0%	0.1%	0.3%	0.8%	1.4%	2.1%	2.8%	3.6%	100.0%
(32) 238210	Electrical Contractors and Other Wiring Installation Contractors	0.0%	0.1%	0.2%	0.6%	0.9%	1.4%	1.9%	2.3%	100.0%
(33) 238220	Plumbing, Heating, and Air-Conditioning Contractors	0.1%	0.2%	0.6%	1.7%	2.8%	4.5%	5.8%	7.6%	100.0%
(34) 238290	Other Building Equipment Contractors	0.0%	0.1%	0.3%	0.9%	1.4%	2.1%	2.7%	3.8%	100.0%
(35) 2383	Building Finishing Contractors	0.1%	0.3%	0.6%	1.2%	1.8%	2.4%	2.9%	3.3%	100.0%
(36) 238310	Drywall and Insulation Contractors	0.0%	0.1%	0.2%	0.5%	0.8%	1.3%	2.1%	2.6%	100.0%
(37) 238320	Painting and Wall Covering Contractors	0.3%	0.7%	1.5%	3.1%	4.5%	6.2%	6.2%	6.2%	100.0%
(38) 238330	Flooring Contractors	0.2%	0.6%	1.2%	2.3%	3.4%	3.9%	4.2%	5.4%	100.0%
(39) 238340	Tile and Terrazzo Contractors	0.2%	0.6%	1.1%	2.0%	3.3%	5.6%	5.6%	5.6%	100.0%
(40) 238350	Finish Carpentry Contractors	1.3%	2.6%	5.2%	12.9%	17.9%	21.5%	21.5%	28.0%	100.0%
(41) 238390	Other Building Finishing Contractors	0.0%	0.1%	0.2%	0.5%	0.9%	1.1%	1.7%	1.7%	100.0%
(42) 2389	Other Specialty Trade Contractors	0.1%	0.2%	0.5%	1.2%	1.8%	2.7%	3.5%	4.7%	100.0%
(43) 238910	Site Preparation Contractors	0.0%	0.1%	0.2%	0.6%	0.7%	1.0%	1.2%	1.8%	100.0%
(44) 238990	All Other Specialty Trade Contractors	0.1%	0.3%	0.8%	1.8%	2.8%	4.3%	5.5%	7.3%	100.0%
(45) 23	All Construction Firms	0.1%	0.2%	0.5%	1.2%	1.9%	3.0%	4.0%	5.2%	100.0%

Appendix Table E.17
Construction Firms, Nationwide,
by Number of Employees,
Average Contract Size,
Federal Procurement Data System 2009

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
NAICS Code		Industry Sector	Average Contract by Number of Employees								
			1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1,000 +
(1)	236	Construction of Buildings	\$299,776	\$359,036	\$382,811	\$490,032	\$955,308	\$1,022,884	\$2,791,710	\$3,093,579	\$5,044,604
(2)	2361	Residential Building Construction	\$93,476	\$166,314	\$424,389	\$1,337,161	\$5,310,161	\$1,552,020	\$31,269,829	\$288,928	\$27,383,562
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	\$13,755	\$51,423	\$3,233,896	\$716,988		\$1,638,690		\$58,853	\$39,242,292
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	\$1,044,112	\$133,299	\$89,022	\$5,199,038	\$48,282,954		\$48,526,405	\$372,267	
(5)	236117	New Housing Operative Builders			\$449,849						
(6)	236118	Residential Remodelers	\$73,954	\$203,102	\$113,273	\$42,645	\$786,709	\$251,967	\$14,013,254	\$18,967	\$24,418,880
(7)	2362	Nonresidential Building Construction	\$311,397	\$361,680	\$382,240	\$484,834	\$912,373	\$1,018,674	\$2,548,654	\$3,175,766	\$4,782,410
(8)	236210	Industrial Building Construction	\$264,364	\$148,789	\$200,683	\$694,168	\$270,821	\$944,550	\$1,497,936	\$27,349,482	\$12,488,994
(9)	236220	Commercial and Institutional Building Construction	\$315,869	\$382,079	\$436,263	\$469,747	\$1,006,293	\$1,022,634	\$2,563,815	\$2,907,170	\$4,488,170
(10)	237	Heavy and Civil Engineering Construction	\$193,717	\$281,430	\$601,917	\$607,376	\$1,029,184	\$827,050	\$2,620,665	\$1,061,437	\$9,143,997
(11)	2371	Utility System Construction	\$109,421	\$153,084	\$197,778	\$425,225	\$864,586	\$328,831	\$8,089,138	\$78,798	\$445,835
(12)	237110	Water and Sewer Line and Related Structures Construction	\$48,646	\$101,315	\$146,082	\$526,965	\$1,377,967	\$226,538	\$10,521,080	\$183,525	\$1,439,415
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	\$1,727,342	\$396,984	\$267,882	\$129,306	\$475,508	\$80,169	\$36,371,486	\$4,013	\$462,116
(14)	237130	Power and Communication Line and Related Structures Construction	\$54,222	\$291,189	\$253,696	\$311,189	\$301,794	\$412,039	\$82,770	\$60,842	\$40,961
(15)	2372	Land Subdivision	\$13,660			\$11,124	\$3,934	\$10,251			\$4,852
(16)	237210	Land Subdivision	\$13,660			\$11,124	\$3,934	\$10,251			\$4,852
(17)	2373	Highway, Street, and Bridge Construction	\$206,948	\$101,108	\$431,647	\$474,107	\$880,083	\$494,865	\$936,181	\$793,392	\$1,881,730
(18)	237310	Highway, Street, and Bridge Construction	\$206,948	\$101,108	\$431,647	\$474,107	\$880,083	\$494,865	\$936,181	\$793,392	\$1,881,730
(19)	2379	Other Heavy and Civil Engineering Construction	\$252,518	\$498,387	\$965,359	\$781,576	\$1,161,654	\$1,161,017	\$2,272,817	\$1,505,728	\$24,755,501
(20)	237990	Other Heavy and Civil Engineering Construction	\$252,518	\$498,387	\$965,359	\$781,576	\$1,161,654	\$1,161,017	\$2,272,817	\$1,505,728	\$24,755,501
(21)	238	Specialty Trade Contractors	\$59,349	\$84,812	\$97,473	\$147,816	\$168,867	\$113,679	\$99,793	\$577,579	\$105,025
(22)	2381	Foundation, Structure, and Building Exterior Contractors	\$47,401	\$86,787	\$113,072	\$293,925	\$383,005	\$239,605	\$158,298	\$120,456	\$232,925
(23)	238110	Poured Concrete Foundation and Structure Contractors	\$24,781	\$17,801	\$99,300	\$861,971	\$4,182,421	\$8,073	\$3,590	\$19,972	\$42,863
(24)	238120	Structural Steel and Precast Concrete Contractors	\$64,434	\$83,910	\$94,653	\$67,228	\$33,009	\$231,046		\$10,193	\$22,170
(25)	238130	Framing Contractors	\$10,610	\$149,640	\$26,156	\$25,096	\$14,574	\$2,707	\$24,735		\$6,537
(26)	238140	Masonry Contractors	\$41,309	\$71,400	\$280,988	\$135,123	\$184,314	\$204,171			
(27)	238150	Glass and Glazing Contractors	\$10,669	\$11,362	\$127,832	\$20,536	\$7,228	\$62,270	\$13,323		\$36,680
(28)	238160	Roofing Contractors	\$102,653	\$160,809	\$145,115	\$295,842	\$332,120	\$335,228	\$272,170		\$159,858
(29)	238170	Siding Contractors	\$22,956	\$7,455	\$12,900	\$35,380	\$153,881				
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	\$19,193	\$42,565	\$53,951	\$173,749	\$149,630	\$161,494	\$7,475	\$126,152	\$340,538
(31)	2382	Building Equipment Contractors	\$70,207	\$72,029	\$73,856	\$108,522	\$137,867	\$31,219	\$69,121	\$32,967	\$79,941
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	\$80,250	\$63,903	\$76,103	\$108,928	\$65,699	\$50,721	\$36,452	\$50,022	\$87,359
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	\$56,791	\$82,024	\$81,358	\$113,252	\$187,505	\$26,839	\$85,801	\$26,608	\$74,575
(34)	238290	Other Building Equipment Contractors	\$56,229	\$89,138	\$37,074	\$76,356	\$115,984	\$16,400	\$47,594	\$45,880	\$70,128
(35)	2383	Building Finishing Contractors	\$29,331	\$88,750	\$42,457	\$94,569	\$40,984	\$45,250	\$21,516	\$16,917	\$114,824
(36)	238310	Drywall and Insulation Contractors	\$22,144	\$23,393	\$6,354	\$536,358	\$5,131	\$3,836	\$8,638	\$46,316	\$187,481
(37)	238320	Painting and Wall Covering Contractors	\$22,748	\$217,897	\$69,428	\$77,516	\$47,393	\$34,821			\$185,084
(38)	238330	Flooring Contractors	\$21,849	\$42,740	\$25,885	\$61,360	\$43,697	\$17,543	\$4,519	\$9,567	\$38,709
(39)	238340	Tile and Terrazzo Contractors	\$21,835	\$11,685	\$16,926	\$7,599	\$7,500	\$12,162			\$11,729
(40)	238350	Finish Carpentry Contractors	\$63,026	\$30,547	\$58,803	\$33,021	\$56,183	\$8,808			\$14,120
(41)	238390	Other Building Finishing Contractors	\$44,354	\$57,387	\$44,858	\$33,470	\$27,340	\$107,523	\$23,043		\$118,928
(42)	2389	Other Specialty Trade Contractors	\$73,269	\$104,564	\$166,145	\$156,053	\$166,324	\$229,804	\$175,311	\$2,398,700	\$161,996
(43)	238910	Site Preparation Contractors	\$47,643	\$155,764	\$283,535	\$203,982	\$264,519	\$1,958,338	\$44,633	\$8,299,988	\$87,972
(44)	238990	All Other Specialty Trade Contractors	\$82,964	\$93,209	\$117,702	\$141,801	\$148,387	\$165,386	\$183,394	\$224,542	\$168,164
(45)	23	All Construction Firms	\$157,955	\$230,416	\$317,137	\$379,689	\$706,751	\$686,026	\$2,033,240	\$1,671,513	\$3,722,042

Appendix Table E.18
Construction Firms, Nationwide,
by Average Firm Revenue,
Average Contract Size,
Federal Procurement Data System 2009

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
			Average Contract by Average Firm Revenue													
	NAICS Code	Industry Sector	<\$10,000	\$10,000- \$20,000	\$20,000- \$30,000	\$30,000- \$40,000	\$40,000- \$50,000	\$50,000- \$75,000	\$75,000- \$100,000	\$100,000- \$150,000	\$150,000- \$200,000	\$200,000- \$250,000	\$250,000- \$500,000	\$500,000- \$750,000	\$750,000- \$1,000,000	\$1,000,000- \$2,000,000
(1)	236	Construction of Buildings	\$454,976	\$406,988	\$676,849	\$325,000	\$214,921	\$522,299	\$265,779	\$131,889	\$132,682	\$260,607	\$304,282	\$229,207	\$229,249	\$299,957
(2)	2361	Residential Building Construction	\$6,760	\$25,471	\$7,640	\$24,032	\$5,819	\$19,582	\$7,547	\$8,612	\$17,790	\$173,211	\$277,708	\$16,021	\$52,526	\$317,781
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	\$25,794				\$11,500		\$13,708				\$44,914		\$5,110	\$1,007,070
(4)	236116	New Multifamily Housing Construction (except Operative Builders)								\$188				\$16,410		\$96,653
(5)	236117	New Housing Operative Builders														
(6)	236118	Residential Remodelers	\$904	\$25,471	\$7,640	\$24,032	\$4,683	\$19,582	\$3,850	\$9,665	\$17,790	\$173,211	\$316,507	\$15,989	\$61,148	\$148,720
(7)	2362	Nonresidential Building Construction	\$636,396	\$429,430	\$715,090	\$410,991	\$263,176	\$555,445	\$268,529	\$140,764	\$141,130	\$273,526	\$305,129	\$232,452	\$231,927	\$299,465
(8)	236210	Industrial Building Construction	\$62,812	\$13,938	\$5,675	\$5,800	\$11,431	\$15,096	\$150,871	\$20,237	\$289,765	\$73,131	\$172,457	\$697,327	\$153,061	\$215,991
(9)	236220	Commercial and Institutional Building Construction	\$713,907	\$484,829	\$725,371	\$425,998	\$284,155	\$600,475	\$736,047	\$147,914	\$131,841	\$284,557	\$319,647	\$221,304	\$249,728	\$305,317
(10)	237	Heavy and Civil Engineering Construction	\$687,701	\$18,740	\$165,558	\$332,924	\$124,706	\$25,186	\$419,112	\$62,657	\$96,325	\$119,371	\$204,694	\$117,721	\$159,936	\$233,270
(11)	2371	Utility System Construction	\$277,945	\$6,671	\$747,736	\$44,202	\$27,301	\$14,314	\$34,370	\$16,122	\$12,839	\$35,923	\$244,337	\$66,260	\$93,395	\$159,355
(12)	237110	Water and Sewer Line and Related Structures Construction			\$747,736	\$57,477	\$48,500	\$12,997	\$37,271	\$21,040	\$13,305	\$24,130	\$49,675	\$70,175	\$75,474	\$147,886
(13)	237120	Oil and Gas Pipeline and Related Structures Construction						\$26,064	\$1,040	\$2,150			\$3,233,607	\$98,310	\$213,048	\$33,065
(14)	237130	Power and Communication Line and Related Structures Construction	\$277,945	\$6,671		\$4,377	\$13,168	\$5,300	\$11,803	\$6,746	\$7,820	\$81,787	\$91,852	\$27,785	\$84,050	\$220,309
(15)	2372	Land Subdivision														\$12,392
(16)	237210	Land Subdivision														\$12,392
(17)	2373	Highway, Street, and Bridge Construction	\$2,286,217	\$27,596	\$126,444	\$11,505	\$33,633	\$28,911	\$432,904	\$89,001	\$50,449	\$118,092	\$158,057	\$88,835	\$90,088	\$151,182
(18)	237310	Highway, Street, and Bridge Construction	\$2,286,217	\$27,596	\$126,444	\$11,505	\$33,633	\$28,911	\$432,904	\$89,001	\$50,449	\$118,092	\$158,057	\$88,835	\$90,088	\$151,182
(19)	2379	Other Heavy and Civil Engineering Construction	\$13,960	\$5,213	\$10,613	\$1,184,130	\$240,526	\$27,624	\$898,331	\$40,258	\$349,071	\$229,582	\$216,531	\$188,507	\$269,306	\$337,070
(20)	237990	Other Heavy and Civil Engineering Construction	\$13,960	\$5,213	\$10,613	\$1,184,130	\$240,526	\$27,624	\$898,331	\$40,258	\$349,071	\$229,582	\$216,531	\$188,507	\$269,306	\$337,070
(21)	238	Specialty Trade Contractors	\$13,183	\$21,702	\$15,828	\$40,378	\$50,685	\$18,408	\$40,043	\$46,900	\$25,051	\$37,232	\$74,838	\$54,790	\$87,363	\$76,344
(22)	2381	Foundation, Structure, and Building Exterior Contractors	\$12,116	\$6,600	\$5,924	\$173,777	\$17,392	\$13,605	\$27,345	\$26,003	\$34,843	\$35,175	\$93,646	\$43,413	\$74,796	\$89,892
(23)	238110	Poured Concrete Foundation and Structure Contractors	\$540	\$12,054	\$5,500		\$51,480	\$9,804	\$20,288	\$5,610	\$9,262	\$26,033	\$34,139	\$45,608	\$18,605	\$18,121
(24)	238120	Structural Steel and Precast Concrete Contractors								\$9,415	\$7,438		\$52,489	\$19,378	\$163,930	\$31,052
(25)	238130	Framing Contractors				\$750	\$7,418		\$1,619	\$19,645	\$13,494	\$4,855	\$8,050	\$12,529	\$24,606	\$62,819
(26)	238140	Masonry Contractors	\$15,250			\$14,570	\$7,065		\$10,779	\$41,878	\$14,000	\$21,081	\$35,557	\$14,500	\$42,353	\$218,056
(27)	238150	Glass and Glazing Contractors	\$4,900		\$358	\$7,178		\$12,100	\$7,023	\$3,865	\$6,475	\$3,807	\$11,500	\$6,930	\$7,121	\$109,031
(28)	238160	Roofing Contractors	\$24,615	\$2,509	\$11,293	\$492,615	\$25,169	\$15,247	\$54,048	\$21,247	\$120,768	\$58,067	\$179,472	\$88,106	\$91,593	\$136,696
(29)	238170	Siding Contractors			\$5,900	\$37,134	\$14,095			\$1,350	\$77,931	\$25,467	\$6,913	\$14,240		\$8,850
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	\$11,817		\$7,065	\$5,461	\$36,091	\$7,937	\$16,024	\$110,541	\$12,466	\$17,660	\$15,371	\$32,443	\$82,119	\$23,235
(31)	2382	Building Equipment Contractors	\$15,720	\$24,762	\$22,563	\$15,445	\$125,656	\$20,239	\$84,568	\$44,058	\$27,759	\$46,409	\$77,580	\$66,868	\$72,416	\$58,318
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	\$16,542	\$8,505	\$23,684	\$6,026	\$108,377	\$16,567	\$69,948	\$52,355	\$31,350	\$38,418	\$101,342	\$51,384	\$75,417	\$54,168
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	\$12,925	\$45,444	\$7,973	\$32,503	\$241,367	\$26,624	\$39,431	\$33,694	\$19,297	\$51,633	\$29,234	\$83,527	\$79,166	\$70,820
(34)	238290	Other Building Equipment Contractors		\$6,845	\$180,253	\$14,930	\$17,030	\$9,978	\$657,715	\$11,402	\$13,212	\$94,752	\$60,432	\$103,593	\$50,567	\$17,652
(35)	2383	Building Finishing Contractors	\$11,430	\$25,024	\$20,655	\$11,488	\$14,671	\$14,406	\$14,901	\$27,384	\$16,794	\$13,718	\$53,389	\$33,775	\$68,303	\$56,552
(36)	238310	Drywall and Insulation Contractors					\$8,820		\$9,124	\$35,040	\$24,381	\$7,800	\$17,005	\$5,950	\$687,316	\$8,155
(37)	238320	Painting and Wall Covering Contractors	\$8,048	\$13,429	\$5,200	\$11,294	\$11,212	\$6,974	\$15,078	\$46,722	\$13,456	\$18,156	\$58,406	\$39,306	\$46,598	\$117,470
(38)	238330	Flooring Contractors	\$31,667	\$85,806	\$19,781	\$17,616	\$23,912	\$11,646	\$13,383	\$13,344	\$46,548	\$10,880	\$15,843	\$32,411	\$19,416	\$56,450
(39)	238340	Tile and Terrazzo Contractors			\$97,500				\$23,422	\$12,750	\$16,568		\$8,268	\$4,715	\$8,749	\$15,658
(40)	238350	Finish Carpentry Contractors	\$1,961	\$9,687	\$7,057	\$9,763	\$9,286	\$11,450	\$14,095	\$10,575	\$13,731	\$13,667	\$134,798	\$35,977	\$21,521	\$64,425
(41)	238390	Other Building Finishing Contractors	\$12,120		\$33,975	\$7,902	\$10,500	\$49,693	\$14,987	\$26,399	\$12,613	\$12,998	\$67,212	\$25,081	\$31,947	\$39,168
(42)	2389	Other Specialty Trade Contractors	\$6,221	\$18,379	\$10,678	\$28,287	\$10,887	\$18,471	\$30,254	\$78,257	\$20,032	\$34,259	\$71,740	\$57,921	\$136,950	\$124,345
(43)	238910	Site Preparation Contractors	\$5,658	\$20,804	\$19,848	\$7,899	\$12,550	\$13,491	\$18,979	\$11,776	\$25,791	\$18,644	\$127,386	\$54,336	\$78,946	\$187,282
(44)	238990	All Other Specialty Trade Contractors	\$6,784	\$16,481	\$8,386	\$32,170	\$10,184	\$18,945	\$33,042	\$95,784	\$17,295	\$40,402	\$58,402	\$59,344	\$158,285	\$110,885
(45)	23	All Construction Firms	\$236,750	\$65,314	\$278,757	\$148,783	\$86,044	\$166,571	\$229,711	\$64,514	\$65,256	\$108,453	\$160,081	\$146,385	\$154,695	\$193,603

Appendix Table E.18
Construction Firms, Nationwide,
by Average Firm Revenue,
Average Contract Size,
Federal Procurement Data System 2009

	(a)	(b)	(c)	(r)	(s)	(t)	(u)	(v)	(w)	(x)
			Average Contract by Average Firm Revenue							
	NAICS Code	Industry Sector	\$2,000,000- \$5,000,000	\$5,000,000- \$10,000,000	\$10,000,000- \$25,000,000	\$25,000,000- \$50,000,000	\$50,000,000- \$100,000,000	\$100,000,000- \$250,000,000	\$250,000,000- \$500,000,000	> \$500,000,000
(1)	236	Construction of Buildings	\$386,134	\$509,183	\$712,482	\$1,039,722	\$3,152,573	\$1,480,900	\$3,675,451	\$8,271,508
(2)	2361	Residential Building Construction	\$608,084	\$1,558,115	\$10,869,929	\$8,591,330	\$8,078,662	\$1,790,747	\$55,596,877	\$18,318,346
(3)	236115	New Single-Family Housing Construction (except Operative Builders)	\$3,029,302	\$13,996			\$1,747,920	\$3,205,607	\$55,596,877	
(4)	236116	New Multifamily Housing Construction (except Operative Builders)	\$1,127,042	\$12,399,875	\$48,282,954		\$48,526,405	\$1,083,317		\$16,742
(5)	236117	New Housing Operative Builders	\$449,849							
(6)	236118	Residential Remodelers	\$34,256	\$119,586	\$180,494	\$8,591,330	\$1,394,878			\$24,418,880
(7)	2362	Nonresidential Building Construction	\$384,416	\$501,605	\$685,492	\$1,004,379	\$2,861,245	\$1,479,662	\$3,437,279	\$8,061,378
(8)	236210	Industrial Building Construction	\$354,071	\$349,982	\$1,200,624	\$173,407	\$2,059,689	\$412,099	\$8,255,806	\$13,051,140
(9)	236220	Commercial and Institutional Building Construction	\$386,067	\$519,630	\$664,272	\$1,165,312	\$2,911,629	\$1,592,865	\$3,324,168	\$7,742,144
(10)	237	Heavy and Civil Engineering Construction	\$520,335	\$670,861	\$960,697	\$1,588,557	\$1,344,559	\$1,124,512	\$2,717,548	\$11,031,524
(11)	2371	Utility System Construction	\$288,375	\$441,394	\$978,528	\$2,805,026	\$2,475,428	\$109,879	\$320,478	\$548,029
(12)	237110	Water and Sewer Line and Related Structures Construction	\$235,469	\$435,320	\$1,517,327	\$8,047,708	\$2,459,954	\$207,377	\$894,580	\$2,784,930
(13)	237120	Oil and Gas Pipeline and Related Structures Construction	\$546,290	\$362,336	\$459,785	\$43,330	\$12,226,148	\$31,791	\$12,949	\$554,254
(14)	237130	Power and Communication Line and Related Structures Construction	\$323,419	\$466,020	\$303,451	\$371,983	\$49,353	\$79,760	\$6,770	\$58,228
(15)	2372	Land Subdivision			\$4,636					\$4,852
(16)	237210	Land Subdivision			\$4,636					\$4,852
(17)	2373	Highway, Street, and Bridge Construction	\$349,739	\$475,677	\$490,679	\$1,516,817	\$436,576	\$2,321,282	\$488,373	\$1,883,883
(18)	237310	Highway, Street, and Bridge Construction	\$349,739	\$475,677	\$490,679	\$1,516,817	\$436,576	\$2,321,282	\$488,373	\$1,883,883
(19)	2379	Other Heavy and Civil Engineering Construction	\$812,436	\$832,442	\$1,360,899	\$1,280,225	\$1,649,462	\$727,381	\$4,297,211	\$23,552,183
(20)	237990	Other Heavy and Civil Engineering Construction	\$812,436	\$832,442	\$1,360,899	\$1,280,225	\$1,649,462	\$727,381	\$4,297,211	\$23,552,183
(21)	238	Specialty Trade Contractors	\$122,881	\$165,365	\$148,199	\$237,166	\$132,777	\$662,741	\$110,121	\$101,538
(22)	2381	Foundation, Structure, and Building Exterior Contractors	\$265,643	\$310,541	\$323,020	\$380,018	\$29,763	\$19,144	\$123,842	\$331,048
(23)	238110	Poured Concrete Foundation and Structure Contractors	\$90,719	\$2,150,363	\$2,511,180	\$6,236	\$19,972		\$45,568	\$37,453
(24)	238120	Structural Steel and Precast Concrete Contractors	\$163,049	\$80,832	\$120,585	\$10,915			\$10,193	\$22,170
(25)	238130	Framing Contractors	\$190,315	\$38,356	\$27,259	\$24,735				\$6,537
(26)	238140	Masonry Contractors	\$219,742	\$188,298	\$151,818					
(27)	238150	Glass and Glazing Contractors	\$82,833	\$19,657	\$16,057	\$6,398	\$64,186	\$40,256	\$7,555	
(28)	238160	Roofing Contractors	\$406,744	\$244,252	\$251,407	\$737,752	\$3,615	\$10,368	\$125,999	\$227,575
(29)	238170	Siding Contractors	\$24,140		\$153,881					
(30)	238190	Other Foundation, Structure, and Building Exterior Contractors	\$94,109	\$90,520	\$194,021	\$215,682	\$9,172	\$9,223	\$143,367	\$393,493
(31)	2382	Building Equipment Contractors	\$79,955	\$150,292	\$87,024	\$105,305	\$30,364	\$56,876	\$82,911	\$82,379
(32)	238210	Electrical Contractors and Other Wiring Installation Contractors	\$100,195	\$136,955	\$61,564	\$90,584	\$59,023	\$47,442	\$25,647	\$94,760
(33)	238220	Plumbing, Heating, and Air-Conditioning Contractors	\$68,198	\$167,459	\$101,847	\$112,011	\$26,022	\$74,571	\$147,166	\$55,036
(34)	238290	Other Building Equipment Contractors	\$62,289	\$117,865	\$44,436	\$73,464	\$16,075	\$20,635	\$30,577	\$156,459
(35)	2383	Building Finishing Contractors	\$87,099	\$39,961	\$175,830	\$100,945	\$34,466	\$24,972	\$214,318	\$41,973
(36)	238310	Drywall and Insulation Contractors	\$7,777	\$40,398	\$503,978	\$7,228	\$8,419	\$6,776	\$46,316	\$187,481
(37)	238320	Painting and Wall Covering Contractors	\$179,288	\$24,411	\$154,655	\$245,353	\$72,948	\$49,380		\$154,994
(38)	238330	Flooring Contractors	\$50,751	\$38,154	\$36,704	\$20,841	\$16,451	\$4,519	\$14,734	\$38,709
(39)	238340	Tile and Terrazzo Contractors	\$5,930	\$79,600	\$8,610	\$16,324				\$11,729
(40)	238350	Finish Carpentry Contractors	\$51,636	\$27,988	\$74,160					\$14,120
(41)	238390	Other Building Finishing Contractors	\$36,911	\$72,137	\$64,233	\$129,724	\$10,889	\$23,532	\$231,822	\$26,292
(42)	2389	Other Specialty Trade Contractors	\$151,809	\$186,446	\$188,168	\$371,731	\$214,394	\$2,715,786	\$93,269	\$135,644
(43)	238910	Site Preparation Contractors	\$223,534	\$323,380	\$272,982	\$3,374,476	\$322,796	\$11,427,649	\$2,886	\$104,147
(44)	238990	All Other Specialty Trade Contractors	\$119,992	\$156,125	\$175,888	\$207,944	\$211,403	\$75,827	\$168,587	\$138,615
(45)	23	All Construction Firms	\$302,152	\$404,809	\$603,250	\$964,921	\$1,395,943	\$1,276,236	\$2,598,006	\$5,318,782

APPENDIX F

Appendix Table F.1
Look-Up Table by Which Construction Contractors Can
Identify the Economic Area for their State and County

(a)	(b)	(c)
State	County	Economic Area
Alabama	Autauga County	114 Montgomery-Alexander City, AL
	Baldwin County	112 Mobile-Daphne-Fairhope, AL
	Barbour County	48 Dothan-Enterprise-Ozark, AL
	Bibb County	19 Birmingham-Hoover-Cullman, AL
	Blount County	19 Birmingham-Hoover-Cullman, AL
	Bullock County	114 Montgomery-Alexander City, AL
	Butler County	114 Montgomery-Alexander City, AL
	Calhoun County	19 Birmingham-Hoover-Cullman, AL
	Chambers County	11 Atlanta-Sandy Springs-Gainesville, GA-AL
	Cherokee County	11 Atlanta-Sandy Springs-Gainesville, GA-AL
	Chilton County	19 Birmingham-Hoover-Cullman, AL
	Choctaw County	80 Jackson-Yazoo City, MS
	Clarke County	112 Mobile-Daphne-Fairhope, AL
	Clay County	19 Birmingham-Hoover-Cullman, AL
	Cleburne County	11 Atlanta-Sandy Springs-Gainesville, GA-AL
	Coffee County	48 Dothan-Enterprise-Ozark, AL
	Colbert County	76 Huntsville-Decatur, AL
	Conecuh County	112 Mobile-Daphne-Fairhope, AL
	Coosa County	114 Montgomery-Alexander City, AL
	Covington County	48 Dothan-Enterprise-Ozark, AL
	Crenshaw County	114 Montgomery-Alexander City, AL
	Cullman County	19 Birmingham-Hoover-Cullman, AL
	Dale County	48 Dothan-Enterprise-Ozark, AL
	Dallas County	114 Montgomery-Alexander City, AL
	DeKalb County	76 Huntsville-Decatur, AL
	Elmore County	114 Montgomery-Alexander City, AL
	Escambia County	112 Mobile-Daphne-Fairhope, AL
	Etowah County	76 Huntsville-Decatur, AL
	Fayette County	19 Birmingham-Hoover-Cullman, AL
	Franklin County	76 Huntsville-Decatur, AL
	Geneva County	48 Dothan-Enterprise-Ozark, AL
	Greene County	19 Birmingham-Hoover-Cullman, AL
	Hale County	19 Birmingham-Hoover-Cullman, AL
	Henry County	48 Dothan-Enterprise-Ozark, AL
	Houston County	48 Dothan-Enterprise-Ozark, AL
	Jackson County	76 Huntsville-Decatur, AL
	Jefferson County	19 Birmingham-Hoover-Cullman, AL
	Lamar County	19 Birmingham-Hoover-Cullman, AL
	Lauderdale County	76 Huntsville-Decatur, AL
	Lawrence County	76 Huntsville-Decatur, AL
	Lee County	39 Columbus-Auburn-Opelika, GA-AL
	Limestone County	76 Huntsville-Decatur, AL
	Lowndes County	114 Montgomery-Alexander City, AL
	Macon County	39 Columbus-Auburn-Opelika, GA-AL
	Madison County	76 Huntsville-Decatur, AL
	Marengo County	112 Mobile-Daphne-Fairhope, AL
	Marion County	19 Birmingham-Hoover-Cullman, AL
	Marshall County	76 Huntsville-Decatur, AL
	Mobile County	112 Mobile-Daphne-Fairhope, AL
	Monroe County	112 Mobile-Daphne-Fairhope, AL
	Montgomery County	114 Montgomery-Alexander City, AL
	Morgan County	76 Huntsville-Decatur, AL
	Perry County	114 Montgomery-Alexander City, AL
	Pickens County	19 Birmingham-Hoover-Cullman, AL
	Pike County	114 Montgomery-Alexander City, AL
	Randolph County	11 Atlanta-Sandy Springs-Gainesville, GA-AL
	Russell County	39 Columbus-Auburn-Opelika, GA-AL
	Shelby County	19 Birmingham-Hoover-Cullman, AL
	St. Clair County	19 Birmingham-Hoover-Cullman, AL
	Sumter County	80 Jackson-Yazoo City, MS
	Talladega County	19 Birmingham-Hoover-Cullman, AL
	Tallapoosa County	114 Montgomery-Alexander City, AL
	Tuscaloosa County	19 Birmingham-Hoover-Cullman, AL
	Walker County	19 Birmingham-Hoover-Cullman, AL
	Washington County	112 Mobile-Daphne-Fairhope, AL
	Wilcox County	112 Mobile-Daphne-Fairhope, AL
	Winston County	19 Birmingham-Hoover-Cullman, AL
Alaska	All Boroughs & Census Areas	8 Anchorage, AK
Arizona	Apache County	128 Phoenix-Mesa-Scottsdale, AZ
	Cochise County	169 Tucson, AZ
	Coconino County	58 Flagstaff, AZ
	Gila County	128 Phoenix-Mesa-Scottsdale, AZ
	Graham County	128 Phoenix-Mesa-Scottsdale, AZ
	Greenlee County	128 Phoenix-Mesa-Scottsdale, AZ
	La Paz County	97 Los Angeles-Long Beach-Riverside, CA
	Maricopa County	128 Phoenix-Mesa-Scottsdale, AZ
	Mohave County	92 Las Vegas-Paradise-Pahrump, NV
	Navajo County	128 Phoenix-Mesa-Scottsdale, AZ
	Pima County	169 Tucson, AZ
	Pinal County	128 Phoenix-Mesa-Scottsdale, AZ
	Santa Cruz County	169 Tucson, AZ
	Yavapai County	128 Phoenix-Mesa-Scottsdale, AZ
	Yuma County	97 Los Angeles-Long Beach-Riverside, CA
Arkansas	Arkansas County	96 Little Rock-North Little Rock-Pine Bluff, AR
	Ashley County	96 Little Rock-North Little Rock-Pine Bluff, AR

Arkansas	Baxter County	159	Springfield, MO
	Benton County	57	Fayetteville-Springdale-Rogers, AR-MO
	Boone County	159	Springfield, MO
	Bradley County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Calhoun County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Carroll County	159	Springfield, MO
	Chicot County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Clark County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Clay County	82	Jonesboro, AR
	Cleburne County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Cleveland County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Columbia County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Conway County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Craighead County	82	Jonesboro, AR
	Crawford County	59	Fort Smith, AR-OK
	Crittenden County	105	Memphis, TN-MS-AR
	Cross County	105	Memphis, TN-MS-AR
	Dallas County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Desha County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Drew County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Faulkner County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Franklin County	59	Fort Smith, AR-OK
	Fulton County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Garland County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Grant County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Greene County	82	Jonesboro, AR
	Hempstead County	165	Texarkana, TX-Texarkana, AR
	Hot Spring County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Howard County	165	Texarkana, TX-Texarkana, AR
	Independence County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Izard County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Jackson County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Jefferson County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Johnson County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Lafayette County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Lawrence County	82	Jonesboro, AR
	Lee County	105	Memphis, TN-MS-AR
	Lincoln County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Little River County	165	Texarkana, TX-Texarkana, AR
	Logan County	59	Fort Smith, AR-OK
	Lonoke County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Madison County	57	Fayetteville-Springdale-Rogers, AR-MO
	Marion County	159	Springfield, MO
	Miller County	165	Texarkana, TX-Texarkana, AR
	Mississippi County	82	Jonesboro, AR
	Monroe County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Montgomery County	165	Texarkana, TX-Texarkana, AR
	Nevada County	165	Texarkana, TX-Texarkana, AR
	Newton County	159	Springfield, MO
	Ouachita County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Perry County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Phillips County	105	Memphis, TN-MS-AR
	Pike County	165	Texarkana, TX-Texarkana, AR
	Poinsett County	82	Jonesboro, AR
	Polk County	165	Texarkana, TX-Texarkana, AR
	Pope County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Prairie County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Pulaski County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Randolph County	82	Jonesboro, AR
	Saline County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Scott County	59	Fort Smith, AR-OK
	Searcy County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Sebastian County	59	Fort Smith, AR-OK
	Sevier County	165	Texarkana, TX-Texarkana, AR
	Sharp County	96	Little Rock-North Little Rock-Pine Bluff, AR
	St. Francis County	105	Memphis, TN-MS-AR
	Stone County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Union County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Van Buren County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Washington County	57	Fayetteville-Springdale-Rogers, AR-MO
	White County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Woodruff County	96	Little Rock-North Little Rock-Pine Bluff, AR
	Yell County	96	Little Rock-North Little Rock-Pine Bluff, AR
California	Alameda County	146	San Jose-San Francisco-Oakland, CA
	Alpine County	140	Sacramento--Arden-Arcade--Truckee, CA-NV
	Amador County	140	Sacramento--Arden-Arcade--Truckee, CA-NV
	Butte County	140	Sacramento--Arden-Arcade--Truckee, CA-NV
	Calaveras County	146	San Jose-San Francisco-Oakland, CA
	Colusa County	140	Sacramento--Arden-Arcade--Truckee, CA-NV
	Contra Costa County	146	San Jose-San Francisco-Oakland, CA
	Del Norte County	146	San Jose-San Francisco-Oakland, CA
	El Dorado County	140	Sacramento--Arden-Arcade--Truckee, CA-NV
	Fresno County	61	Fresno-Madera, CA
	Glenn County	140	Sacramento--Arden-Arcade--Truckee, CA-NV
	Humboldt County	146	San Jose-San Francisco-Oakland, CA
	Imperial County	97	Los Angeles-Long Beach-Riverside, CA
	Inyo County	97	Los Angeles-Long Beach-Riverside, CA
	Kern County	97	Los Angeles-Long Beach-Riverside, CA
	Kings County	61	Fresno-Madera, CA
	Lake County	146	San Jose-San Francisco-Oakland, CA
	Lassen County	136	Reno-Sparks, NV
	Los Angeles County	97	Los Angeles-Long Beach-Riverside, CA
	Madera County	61	Fresno-Madera, CA
	Marin County	146	San Jose-San Francisco-Oakland, CA
	Mariposa County	61	Fresno-Madera, CA
	Mendocino County	146	San Jose-San Francisco-Oakland, CA
	Merced County	146	San Jose-San Francisco-Oakland, CA

California	Modoc County	135	Redding, CA
	Mono County	97	Los Angeles-Long Beach-Riverside, CA
	Monterey County	146	San Jose-San Francisco-Oakland, CA
	Napa County	146	San Jose-San Francisco-Oakland, CA
	Nevada County	140	Sacramento--Arden-Arcade--Truckee, CA-NV
	Orange County	97	Los Angeles-Long Beach-Riverside, CA
	Placer County	140	Sacramento--Arden-Arcade--Truckee, CA-NV
	Plumas County	136	Reno-Sparks, NV
	Riverside County	97	Los Angeles-Long Beach-Riverside, CA
	Sacramento County	140	Sacramento--Arden-Arcade--Truckee, CA-NV
	San Benito County	146	San Jose-San Francisco-Oakland, CA
	San Bernardino County	97	Los Angeles-Long Beach-Riverside, CA
	San Diego County	145	San Diego-Carlsbad-San Marcos, CA
	San Francisco County	146	San Jose-San Francisco-Oakland, CA
	San Joaquin County	146	San Jose-San Francisco-Oakland, CA
	San Luis Obispo County	97	Los Angeles-Long Beach-Riverside, CA
	San Mateo County	146	San Jose-San Francisco-Oakland, CA
	Santa Barbara County	97	Los Angeles-Long Beach-Riverside, CA
	Santa Clara County	146	San Jose-San Francisco-Oakland, CA
	Santa Cruz County	146	San Jose-San Francisco-Oakland, CA
	Shasta County	135	Redding, CA
	Sierra County	136	Reno-Sparks, NV
	Siskiyou County	135	Redding, CA
	Solano County	146	San Jose-San Francisco-Oakland, CA
	Sonoma County	146	San Jose-San Francisco-Oakland, CA
	Stanislaus County	146	San Jose-San Francisco-Oakland, CA
	Sutter County	140	Sacramento--Arden-Arcade--Truckee, CA-NV
	Tehama County	135	Redding, CA
	Trinity County	146	San Jose-San Francisco-Oakland, CA
	Tulare County	61	Fresno-Madera, CA
	Tuolumne County	146	San Jose-San Francisco-Oakland, CA
	Ventura County	97	Los Angeles-Long Beach-Riverside, CA
	Yolo County	140	Sacramento--Arden-Arcade--Truckee, CA-NV
	Yuba County	140	Sacramento--Arden-Arcade--Truckee, CA-NV
Colorado	Adams County	45	Denver-Aurora-Boulder, CO
	Alamosa County	45	Denver-Aurora-Boulder, CO
	Arapahoe County	45	Denver-Aurora-Boulder, CO
	Archuleta County	56	Farmington, NM
	Baca County	132	Pueblo, CO
	Bent County	132	Pueblo, CO
	Boulder County	45	Denver-Aurora-Boulder, CO
	Broomfield County	45	Denver-Aurora-Boulder, CO
	Chaffee County	45	Denver-Aurora-Boulder, CO
	Cheyenne County	36	Colorado Springs, CO
	Clear Creek County	45	Denver-Aurora-Boulder, CO
	Conejos County	45	Denver-Aurora-Boulder, CO
	Costilla County	45	Denver-Aurora-Boulder, CO
	Crowley County	132	Pueblo, CO
	Custer County	36	Colorado Springs, CO
	Delta County	45	Denver-Aurora-Boulder, CO
	Denver County	45	Denver-Aurora-Boulder, CO
	Dolores County	56	Farmington, NM
	Douglas County	45	Denver-Aurora-Boulder, CO
	Eagle County	45	Denver-Aurora-Boulder, CO
	El Paso County	36	Colorado Springs, CO
	Elbert County	45	Denver-Aurora-Boulder, CO
	Fremont County	36	Colorado Springs, CO
	Garfield County	45	Denver-Aurora-Boulder, CO
	Gilpin County	45	Denver-Aurora-Boulder, CO
	Grand County	45	Denver-Aurora-Boulder, CO
	Gunnison County	45	Denver-Aurora-Boulder, CO
	Hinsdale County	56	Farmington, NM
	Huerfano County	132	Pueblo, CO
	Jackson County	45	Denver-Aurora-Boulder, CO
	Jefferson County	45	Denver-Aurora-Boulder, CO
	Kiowa County	132	Pueblo, CO
	Kit Carson County	36	Colorado Springs, CO
	La Plata County	56	Farmington, NM
	Lake County	45	Denver-Aurora-Boulder, CO
	Larimer County	45	Denver-Aurora-Boulder, CO
	Las Animas County	132	Pueblo, CO
	Lincoln County	36	Colorado Springs, CO
	Logan County	45	Denver-Aurora-Boulder, CO
	Mesa County	45	Denver-Aurora-Boulder, CO
	Mineral County	45	Denver-Aurora-Boulder, CO
	Moffat County	45	Denver-Aurora-Boulder, CO
	Montezuma County	56	Farmington, NM
	Montrose County	45	Denver-Aurora-Boulder, CO
	Morgan County	45	Denver-Aurora-Boulder, CO
	Otero County	132	Pueblo, CO
	Ouray County	45	Denver-Aurora-Boulder, CO
	Park County	45	Denver-Aurora-Boulder, CO
	Phillips County	45	Denver-Aurora-Boulder, CO
	Pitkin County	45	Denver-Aurora-Boulder, CO
	Prowers County	132	Pueblo, CO
	Pueblo County	132	Pueblo, CO
	Rio Blanco County	45	Denver-Aurora-Boulder, CO
	Rio Grande County	45	Denver-Aurora-Boulder, CO
	Routt County	45	Denver-Aurora-Boulder, CO
	Saguache County	45	Denver-Aurora-Boulder, CO
	San Juan County	56	Farmington, NM
	San Miguel County	45	Denver-Aurora-Boulder, CO
	Sedgwick County	45	Denver-Aurora-Boulder, CO
Colorado	Summit County	45	Denver-Aurora-Boulder, CO
	Teller County	36	Colorado Springs, CO
	Washington County	45	Denver-Aurora-Boulder, CO
	Weld County	45	Denver-Aurora-Boulder, CO

	Yuma County	45	Denver-Aurora-Boulder, CO
Connecticut	Fairfield County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Hartford County	72	Hartford-West Hartford-Willimantic, CT
	Litchfield County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Middlesex County	72	Hartford-West Hartford-Willimantic, CT
	New Haven County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	New London County	72	Hartford-West Hartford-Willimantic, CT
	Tolland County	72	Hartford-West Hartford-Willimantic, CT
	Windham County	72	Hartford-West Hartford-Willimantic, CT
Delaware	Kent County	49	Dover, DE
	New Castle County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Sussex County	49	Dover, DE
Dist. Of Columbia	--	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
Florida	Alachua County	62	Gainesville, FL
	Baker County	79	Jacksonville, FL
	Bay County	123	Panama City-Lynn Haven, FL
	Bradford County	62	Gainesville, FL
	Brevard County	121	Orlando-The Villages, FL
	Broward County	106	Miami-Fort Lauderdale-Miami Beach, FL
	Calhoun County	123	Panama City-Lynn Haven, FL
	Charlotte County	148	Sarasota-Bradenton-Venice, FL
	Citrus County	121	Orlando-The Villages, FL
	Clay County	79	Jacksonville, FL
	Collier County	148	Sarasota-Bradenton-Venice, FL
	Columbia County	62	Gainesville, FL
	DeSoto County	148	Sarasota-Bradenton-Venice, FL
	Dixie County	62	Gainesville, FL
	Duval County	79	Jacksonville, FL
	Escambia County	125	Pensacola-Ferry Pass-Brent, FL
	Flagler County	121	Orlando-The Villages, FL
	Franklin County	163	Tallahassee, FL
	Gadsden County	163	Tallahassee, FL
	Gilchrist County	62	Gainesville, FL
	Glades County	106	Miami-Fort Lauderdale-Miami Beach, FL
	Gulf County	123	Panama City-Lynn Haven, FL
	Hamilton County	3	Albany, GA
	Hardee County	121	Orlando-The Villages, FL
	Hendry County	106	Miami-Fort Lauderdale-Miami Beach, FL
	Hernando County	164	Tampa-St. Petersburg-Clearwater, FL
	Highlands County	121	Orlando-The Villages, FL
	Hillsborough County	164	Tampa-St. Petersburg-Clearwater, FL
	Holmes County	123	Panama City-Lynn Haven, FL
	Indian River County	106	Miami-Fort Lauderdale-Miami Beach, FL
	Jackson County	123	Panama City-Lynn Haven, FL
	Jefferson County	163	Tallahassee, FL
	Lafayette County	62	Gainesville, FL
	Lake County	121	Orlando-The Villages, FL
	Lee County	148	Sarasota-Bradenton-Venice, FL
	Leon County	163	Tallahassee, FL
	Levy County	62	Gainesville, FL
	Liberty County	163	Tallahassee, FL
	Madison County	3	Albany, GA
	Manatee County	148	Sarasota-Bradenton-Venice, FL
	Marion County	121	Orlando-The Villages, FL
	Martin County	106	Miami-Fort Lauderdale-Miami Beach, FL
	Miami-Dade County	106	Miami-Fort Lauderdale-Miami Beach, FL
	Monroe County	106	Miami-Fort Lauderdale-Miami Beach, FL
	Nassau County	79	Jacksonville, FL
	Okaloosa County	125	Pensacola-Ferry Pass-Brent, FL
	Okeechobee County	106	Miami-Fort Lauderdale-Miami Beach, FL
	Orange County	121	Orlando-The Villages, FL
	Osceola County	121	Orlando-The Villages, FL
	Palm Beach County	106	Miami-Fort Lauderdale-Miami Beach, FL
	Pasco County	164	Tampa-St. Petersburg-Clearwater, FL
	Pinellas County	164	Tampa-St. Petersburg-Clearwater, FL
	Polk County	121	Orlando-The Villages, FL
	Putnam County	79	Jacksonville, FL
	Santa Rosa County	125	Pensacola-Ferry Pass-Brent, FL
	Sarasota County	148	Sarasota-Bradenton-Venice, FL
	Seminole County	121	Orlando-The Villages, FL
	St. Johns County	79	Jacksonville, FL
	St. Lucie County	106	Miami-Fort Lauderdale-Miami Beach, FL
	Sumter County	121	Orlando-The Villages, FL
	Suwannee County	62	Gainesville, FL
	Taylor County	163	Tallahassee, FL
	Union County	62	Gainesville, FL
	Volusia County	121	Orlando-The Villages, FL
	Wakulla County	163	Tallahassee, FL
	Walton County	125	Pensacola-Ferry Pass-Brent, FL
	Washington County	123	Panama City-Lynn Haven, FL
Georgia	Appling County	100	Macon-Warner Robins-Fort Valley, GA
	Atkinson County	79	Jacksonville, FL
	Bacon County	79	Jacksonville, FL
	Baker County	3	Albany, GA
	Baldwin County	100	Macon-Warner Robins-Fort Valley, GA
	Banks County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Barrow County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Bartow County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Ben Hill County	3	Albany, GA
	Berrien County	3	Albany, GA
	Bibb County	100	Macon-Warner Robins-Fort Valley, GA
	Bleckley County	100	Macon-Warner Robins-Fort Valley, GA
	Brantley County	79	Jacksonville, FL
	Brooks County	3	Albany, GA
	Bryan County	149	Savannah-Hinesville-Fort Stewart, GA
	Bulloch County	149	Savannah-Hinesville-Fort Stewart, GA
	Burke County	12	Augusta-Richmond County, GA-SC

Georgia	Butts County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Calhoun County	3	Albany, GA
	Camden County	79	Jacksonville, FL
	Candler County	149	Savannah-Hinesville-Fort Stewart, GA
	Carroll County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Catoosa County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Charlton County	79	Jacksonville, FL
	Chatham County	149	Savannah-Hinesville-Fort Stewart, GA
	Chattahoochee County	39	Columbus-Auburn-Opelika, GA-AL
	Chattooga County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Cherokee County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Clarke County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Clay County	3	Albany, GA
	Clayton County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Clinch County	79	Jacksonville, FL
	Cobb County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Coffee County	79	Jacksonville, FL
	Colquitt County	3	Albany, GA
	Columbia County	12	Augusta-Richmond County, GA-SC
	Cook County	3	Albany, GA
	Coweta County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Crawford County	100	Macon-Warner Robins-Fort Valley, GA
	Crisp County	3	Albany, GA
	Dade County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Dawson County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Decatur County	163	Tallahassee, FL
	DeKalb County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Dodge County	100	Macon-Warner Robins-Fort Valley, GA
	Dooley County	3	Albany, GA
	Dougherty County	3	Albany, GA
	Douglas County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Early County	163	Tallahassee, FL
	Echols County	3	Albany, GA
	Effingham County	149	Savannah-Hinesville-Fort Stewart, GA
	Elbert County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Emanuel County	149	Savannah-Hinesville-Fort Stewart, GA
	Evans County	149	Savannah-Hinesville-Fort Stewart, GA
	Fannin County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Fayette County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Floyd County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Forsyth County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Franklin County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Fulton County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Gilmer County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Glascok County	12	Augusta-Richmond County, GA-SC
	Glynn County	79	Jacksonville, FL
	Gordon County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Grady County	163	Tallahassee, FL
	Greene County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Gwinnett County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Habersham County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Hall County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Hancock County	100	Macon-Warner Robins-Fort Valley, GA
	Haralson County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Harris County	39	Columbus-Auburn-Opelika, GA-AL
	Hart County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Heard County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Henry County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Houston County	100	Macon-Warner Robins-Fort Valley, GA
	Irwin County	3	Albany, GA
	Jackson County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Jasper County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Jeff Davis County	100	Macon-Warner Robins-Fort Valley, GA
	Jefferson County	12	Augusta-Richmond County, GA-SC
	Jenkins County	149	Savannah-Hinesville-Fort Stewart, GA
	Johnson County	100	Macon-Warner Robins-Fort Valley, GA
	Jones County	100	Macon-Warner Robins-Fort Valley, GA
	Lamar County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Lanier County	3	Albany, GA
	Laurens County	100	Macon-Warner Robins-Fort Valley, GA
	Lee County	3	Albany, GA
	Liberty County	149	Savannah-Hinesville-Fort Stewart, GA
	Lincoln County	12	Augusta-Richmond County, GA-SC
	Long County	149	Savannah-Hinesville-Fort Stewart, GA
	Lowndes County	3	Albany, GA
	Lumpkin County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Macon County	100	Macon-Warner Robins-Fort Valley, GA
	Madison County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Marion County	39	Columbus-Auburn-Opelika, GA-AL
	McDuffie County	12	Augusta-Richmond County, GA-SC
	McIntosh County	79	Jacksonville, FL
	Meriwether County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Miller County	163	Tallahassee, FL
	Mitchell County	3	Albany, GA
	Monroe County	100	Macon-Warner Robins-Fort Valley, GA
	Montgomery County	149	Savannah-Hinesville-Fort Stewart, GA
	Morgan County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Murray County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Muscogee County	39	Columbus-Auburn-Opelika, GA-AL
	Newton County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Oconee County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Oglethorpe County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Paulding County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Peach County	100	Macon-Warner Robins-Fort Valley, GA
	Pickens County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Pierce County	79	Jacksonville, FL
	Pike County	11	Atlanta-Sandy Springs-Gainesville, GA-AL

Georgia	Polk County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Pulaski County	100	Macon-Warner Robins-Fort Valley, GA
	Putnam County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Quitman County	48	Dothan-Enterprise-Ozark, AL
	Rabun County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Randolph County	3	Albany, GA
	Richmond County	12	Augusta-Richmond County, GA-SC
	Rockdale County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Schley County	3	Albany, GA
	Screven County	149	Savannah-Hinesville-Fort Stewart, GA
	Seminole County	163	Tallahassee, FL
	Spalding County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Stephens County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Stewart County	39	Columbus-Auburn-Opelika, GA-AL
	Sumter County	3	Albany, GA
	Talbot County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Taliaferro County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Tattnall County	149	Savannah-Hinesville-Fort Stewart, GA
	Taylor County	100	Macon-Warner Robins-Fort Valley, GA
	Telfair County	100	Macon-Warner Robins-Fort Valley, GA
	Terrell County	3	Albany, GA
	Thomas County	163	Tallahassee, FL
	Tift County	3	Albany, GA
	Toombs County	149	Savannah-Hinesville-Fort Stewart, GA
	Towns County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Treutlen County	149	Savannah-Hinesville-Fort Stewart, GA
	Troup County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Turner County	3	Albany, GA
	Twiggs County	100	Macon-Warner Robins-Fort Valley, GA
	Union County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Upson County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Walker County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Walton County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Ware County	79	Jacksonville, FL
	Warren County	12	Augusta-Richmond County, GA-SC
	Washington County	100	Macon-Warner Robins-Fort Valley, GA
	Wayne County	79	Jacksonville, FL
	Webster County	39	Columbus-Auburn-Opelika, GA-AL
	Wheeler County	100	Macon-Warner Robins-Fort Valley, GA
	White County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Whitfield County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Wilcox County	3	Albany, GA
	Wilkes County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Wilkinson County	100	Macon-Warner Robins-Fort Valley, GA
	Worth County	3	Albany, GA
Hawaii	All Counties	74	Honolulu, HI
Idaho	Ada County	21	Boise City-Nampa, ID
	Adams County	21	Boise City-Nampa, ID
	Bannock County	77	Idaho Falls-Blackfoot, ID
	Bear Lake County	77	Idaho Falls-Blackfoot, ID
	Benewah County	157	Spokane, WA
	Bingham County	77	Idaho Falls-Blackfoot, ID
	Blaine County	172	Twin Falls, ID
	Boise County	21	Boise City-Nampa, ID
	Bonner County	157	Spokane, WA
	Bonneville County	77	Idaho Falls-Blackfoot, ID
	Boundary County	157	Spokane, WA
	Butte County	77	Idaho Falls-Blackfoot, ID
	Camas County	172	Twin Falls, ID
	Canyon County	21	Boise City-Nampa, ID
	Caribou County	77	Idaho Falls-Blackfoot, ID
	Cassia County	172	Twin Falls, ID
	Clark County	77	Idaho Falls-Blackfoot, ID
	Clearwater County	93	Lewiston, ID-WA
	Custer County	77	Idaho Falls-Blackfoot, ID
	Elmore County	21	Boise City-Nampa, ID
	Franklin County	142	Salt Lake City-Ogden-Clearfield, UT
	Fremont County	77	Idaho Falls-Blackfoot, ID
	Gem County	21	Boise City-Nampa, ID
	Gooding County	172	Twin Falls, ID
	Idaho County	93	Lewiston, ID-WA
	Jefferson County	77	Idaho Falls-Blackfoot, ID
	Jerome County	172	Twin Falls, ID
	Kootenai County	157	Spokane, WA
	Latah County	157	Spokane, WA
	Lemhi County	77	Idaho Falls-Blackfoot, ID
	Lewis County	93	Lewiston, ID-WA
	Lincoln County	172	Twin Falls, ID
	Madison County	77	Idaho Falls-Blackfoot, ID
	Minidoka County	172	Twin Falls, ID
	Nez Perce County	93	Lewiston, ID-WA
	Oneida County	142	Salt Lake City-Ogden-Clearfield, UT
	Owyhee County	21	Boise City-Nampa, ID
	Payette County	21	Boise City-Nampa, ID
	Power County	77	Idaho Falls-Blackfoot, ID
	Shoshone County	157	Spokane, WA
	Teton County	26	Casper, WY
	Twin Falls County	172	Twin Falls, ID
	Valley County	21	Boise City-Nampa, ID
	Washington County	21	Boise City-Nampa, ID
	Adams County	158	Springfield, IL
	Alexander County	25	Cape Girardeau-Jackson, MO-IL
	Bond County	160	St. Louis-St. Charles-Farmington, MO-IL
	Boone County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Brown County	158	Springfield, IL
	Bureau County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Calhoun County	160	St. Louis-St. Charles-Farmington, MO-IL

Illinois	Carroll County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Cass County	158	Springfield, IL
	Champaign County	28	Champaign-Urbana, IL
	Christian County	158	Springfield, IL
	Clark County	78	Indianapolis-Anderson-Columbus, IN
	Clay County	28	Champaign-Urbana, IL
	Clinton County	160	St. Louis-St. Charles-Farmington, MO-IL
	Coles County	28	Champaign-Urbana, IL
	Cook County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Crawford County	78	Indianapolis-Anderson-Columbus, IN
	Cumberland County	28	Champaign-Urbana, IL
	De Witt County	126	Peoria-Canton, IL
	DeKalb County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Douglas County	28	Champaign-Urbana, IL
	DuPage County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Edgar County	78	Indianapolis-Anderson-Columbus, IN
	Edwards County	54	Evansville, IN-KY
	Effingham County	28	Champaign-Urbana, IL
	Fayette County	28	Champaign-Urbana, IL
	Ford County	28	Champaign-Urbana, IL
	Franklin County	160	St. Louis-St. Charles-Farmington, MO-IL
	Fulton County	126	Peoria-Canton, IL
	Gallatin County	54	Evansville, IN-KY
	Greene County	158	Springfield, IL
	Grundy County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Hamilton County	160	St. Louis-St. Charles-Farmington, MO-IL
	Hancock County	126	Peoria-Canton, IL
	Hardin County	160	St. Louis-St. Charles-Farmington, MO-IL
	Henderson County	126	Peoria-Canton, IL
	Henry County	43	Davenport-Moline-Rock Island, IA-IL
	Iroquois County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Jackson County	160	St. Louis-St. Charles-Farmington, MO-IL
	Jasper County	28	Champaign-Urbana, IL
	Jefferson County	160	St. Louis-St. Charles-Farmington, MO-IL
	Jersey County	160	St. Louis-St. Charles-Farmington, MO-IL
	Jo Daviess County	101	Madison-Baraboo, WI
	Johnson County	160	St. Louis-St. Charles-Farmington, MO-IL
	Kane County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Kankakee County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Kendall County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Knox County	126	Peoria-Canton, IL
	La Salle County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Lake County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Lawrence County	78	Indianapolis-Anderson-Columbus, IN
	Lee County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Livingston County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Logan County	158	Springfield, IL
	Macon County	158	Springfield, IL
	Macoupin County	160	St. Louis-St. Charles-Farmington, MO-IL
	Madison County	160	St. Louis-St. Charles-Farmington, MO-IL
	Marion County	160	St. Louis-St. Charles-Farmington, MO-IL
	Marshall County	126	Peoria-Canton, IL
	Mason County	126	Peoria-Canton, IL
	Massac County	122	Paducah, KY-IL
	McDonough County	126	Peoria-Canton, IL
	McHenry County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	McLean County	126	Peoria-Canton, IL
	Menard County	158	Springfield, IL
	Mercer County	43	Davenport-Moline-Rock Island, IA-IL
	Monroe County	160	St. Louis-St. Charles-Farmington, MO-IL
	Montgomery County	158	Springfield, IL
	Morgan County	158	Springfield, IL
	Moultrie County	28	Champaign-Urbana, IL
	Ogle County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Peoria County	126	Peoria-Canton, IL
	Perry County	160	St. Louis-St. Charles-Farmington, MO-IL
	Piatt County	28	Champaign-Urbana, IL
	Pike County	158	Springfield, IL
	Pope County	122	Paducah, KY-IL
	Pulaski County	25	Cape Girardeau-Jackson, MO-IL
	Putnam County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Randolph County	160	St. Louis-St. Charles-Farmington, MO-IL
	Richland County	28	Champaign-Urbana, IL
	Rock Island County	43	Davenport-Moline-Rock Island, IA-IL
	Saline County	160	St. Louis-St. Charles-Farmington, MO-IL
	Sangamon County	158	Springfield, IL
	Schuyler County	158	Springfield, IL
	Scott County	158	Springfield, IL
	Shelby County	28	Champaign-Urbana, IL
	St. Clair County	160	St. Louis-St. Charles-Farmington, MO-IL
	Stark County	126	Peoria-Canton, IL
	Stephenson County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Tazewell County	126	Peoria-Canton, IL
	Union County	160	St. Louis-St. Charles-Farmington, MO-IL
	Vermilion County	28	Champaign-Urbana, IL
	Wabash County	54	Evansville, IN-KY
	Warren County	126	Peoria-Canton, IL
	Washington County	160	St. Louis-St. Charles-Farmington, MO-IL
	Wayne County	28	Champaign-Urbana, IL
Illinois	White County	54	Evansville, IN-KY
	Whiteside County	43	Davenport-Moline-Rock Island, IA-IL
	Will County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Williamson County	160	St. Louis-St. Charles-Farmington, MO-IL
	Winnebago County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Woodford County	126	Peoria-Canton, IL
	Adams County	60	Fort Wayne-Huntington-Auburn, IN
	Allen County	60	Fort Wayne-Huntington-Auburn, IN

Indiana	Bartholomew County	78	Indianapolis-Anderson-Columbus, IN
	Benton County	78	Indianapolis-Anderson-Columbus, IN
	Blackford County	60	Fort Wayne-Huntington-Auburn, IN
	Boone County	78	Indianapolis-Anderson-Columbus, IN
	Brown County	78	Indianapolis-Anderson-Columbus, IN
	Carroll County	78	Indianapolis-Anderson-Columbus, IN
	Cass County	78	Indianapolis-Anderson-Columbus, IN
	Clark County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Clay County	78	Indianapolis-Anderson-Columbus, IN
	Clinton County	78	Indianapolis-Anderson-Columbus, IN
	Crawford County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Daviess County	54	Evansville, IN-KY
	De Kalb County	60	Fort Wayne-Huntington-Auburn, IN
	Dearborn County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Decatur County	78	Indianapolis-Anderson-Columbus, IN
	Delaware County	78	Indianapolis-Anderson-Columbus, IN
	Dubois County	54	Evansville, IN-KY
	Elkhart County	156	South Bend-Mishawaka, IN-MI
	Fayette County	78	Indianapolis-Anderson-Columbus, IN
	Floyd County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Fountain County	78	Indianapolis-Anderson-Columbus, IN
	Franklin County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Fulton County	156	South Bend-Mishawaka, IN-MI
	Gibson County	54	Evansville, IN-KY
	Grant County	60	Fort Wayne-Huntington-Auburn, IN
	Greene County	78	Indianapolis-Anderson-Columbus, IN
	Hamilton County	78	Indianapolis-Anderson-Columbus, IN
	Hancock County	78	Indianapolis-Anderson-Columbus, IN
	Harrison County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Hendricks County	78	Indianapolis-Anderson-Columbus, IN
	Henry County	78	Indianapolis-Anderson-Columbus, IN
	Howard County	78	Indianapolis-Anderson-Columbus, IN
	Huntington County	60	Fort Wayne-Huntington-Auburn, IN
	Jackson County	78	Indianapolis-Anderson-Columbus, IN
	Jasper County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Jay County	60	Fort Wayne-Huntington-Auburn, IN
	Jefferson County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Jennings County	78	Indianapolis-Anderson-Columbus, IN
	Johnson County	78	Indianapolis-Anderson-Columbus, IN
	Knox County	78	Indianapolis-Anderson-Columbus, IN
	Kosciusko County	156	South Bend-Mishawaka, IN-MI
	La Porte County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Lagrange County	156	South Bend-Mishawaka, IN-MI
	Lake County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Lawrence County	78	Indianapolis-Anderson-Columbus, IN
	Madison County	78	Indianapolis-Anderson-Columbus, IN
	Marion County	78	Indianapolis-Anderson-Columbus, IN
	Marshall County	156	South Bend-Mishawaka, IN-MI
	Martin County	54	Evansville, IN-KY
	Miami County	78	Indianapolis-Anderson-Columbus, IN
	Monroe County	78	Indianapolis-Anderson-Columbus, IN
	Montgomery County	78	Indianapolis-Anderson-Columbus, IN
	Morgan County	78	Indianapolis-Anderson-Columbus, IN
	Newton County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Noble County	60	Fort Wayne-Huntington-Auburn, IN
	Ohio County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Orange County	78	Indianapolis-Anderson-Columbus, IN
	Owen County	78	Indianapolis-Anderson-Columbus, IN
	Parke County	78	Indianapolis-Anderson-Columbus, IN
	Perry County	54	Evansville, IN-KY
	Pike County	54	Evansville, IN-KY
	Porter County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Posey County	54	Evansville, IN-KY
	Pulaski County	156	South Bend-Mishawaka, IN-MI
	Putnam County	78	Indianapolis-Anderson-Columbus, IN
	Randolph County	78	Indianapolis-Anderson-Columbus, IN
	Ripley County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Rush County	78	Indianapolis-Anderson-Columbus, IN
	Scott County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Shelby County	78	Indianapolis-Anderson-Columbus, IN
	Spencer County	54	Evansville, IN-KY
	St. Joseph County	156	South Bend-Mishawaka, IN-MI
	Starke County	156	South Bend-Mishawaka, IN-MI
	Steuben County	60	Fort Wayne-Huntington-Auburn, IN
	Sullivan County	78	Indianapolis-Anderson-Columbus, IN
	Switzerland County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Tippecanoe County	78	Indianapolis-Anderson-Columbus, IN
	Tipton County	78	Indianapolis-Anderson-Columbus, IN
	Union County	78	Indianapolis-Anderson-Columbus, IN
	Vanderburgh County	54	Evansville, IN-KY
	Vermillion County	78	Indianapolis-Anderson-Columbus, IN
	Vigo County	78	Indianapolis-Anderson-Columbus, IN
	Wabash County	60	Fort Wayne-Huntington-Auburn, IN
	Warren County	78	Indianapolis-Anderson-Columbus, IN
	Warrick County	54	Evansville, IN-KY
	Washington County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Wayne County	78	Indianapolis-Anderson-Columbus, IN
	Wells County	60	Fort Wayne-Huntington-Auburn, IN
Indiana	White County	78	Indianapolis-Anderson-Columbus, IN
	Whitley County	60	Fort Wayne-Huntington-Auburn, IN
	Adair County	46	Des Moines-Newton-Pella, IA
	Adams County	46	Des Moines-Newton-Pella, IA
	Allamakee County	101	Madison-Baraboo, WI
	Appanoose County	46	Des Moines-Newton-Pella, IA
	Audubon County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Benton County	27	Cedar Rapids, IA
	Black Hawk County	175	Waterloo-Cedar Falls, IA

Iowa	Boone County	46	Des Moines-Newton-Pella, IA
	Bremer County	175	Waterloo-Cedar Falls, IA
	Buchanan County	175	Waterloo-Cedar Falls, IA
	Buena Vista County	46	Des Moines-Newton-Pella, IA
	Butler County	175	Waterloo-Cedar Falls, IA
	Calhoun County	46	Des Moines-Newton-Pella, IA
	Carroll County	46	Des Moines-Newton-Pella, IA
	Cass County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Cedar County	27	Cedar Rapids, IA
	Cerro Gordo County	103	Mason City, IA
	Cherokee County	46	Des Moines-Newton-Pella, IA
	Chickasaw County	103	Mason City, IA
	Clarke County	46	Des Moines-Newton-Pella, IA
	Clay County	46	Des Moines-Newton-Pella, IA
	Clayton County	101	Madison-Baraboo, WI
	Clinton County	43	Davenport-Moline-Rock Island, IA-IL
	Crawford County	46	Des Moines-Newton-Pella, IA
	Dallas County	46	Des Moines-Newton-Pella, IA
	Davis County	46	Des Moines-Newton-Pella, IA
	Decatur County	46	Des Moines-Newton-Pella, IA
	Delaware County	101	Madison-Baraboo, WI
	Des Moines County	126	Peoria-Canton, IL
	Dickinson County	46	Des Moines-Newton-Pella, IA
	Dubuque County	101	Madison-Baraboo, WI
	Emmet County	46	Des Moines-Newton-Pella, IA
	Fayette County	175	Waterloo-Cedar Falls, IA
	Floyd County	103	Mason City, IA
	Franklin County	46	Des Moines-Newton-Pella, IA
	Fremont County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Greene County	46	Des Moines-Newton-Pella, IA
	Grundy County	175	Waterloo-Cedar Falls, IA
	Guthrie County	46	Des Moines-Newton-Pella, IA
	Hamilton County	46	Des Moines-Newton-Pella, IA
	Hancock County	103	Mason City, IA
	Hardin County	46	Des Moines-Newton-Pella, IA
	Harrison County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Henry County	126	Peoria-Canton, IL
	Howard County	103	Mason City, IA
	Humboldt County	46	Des Moines-Newton-Pella, IA
	Ida County	46	Des Moines-Newton-Pella, IA
	Iowa County	27	Cedar Rapids, IA
	Jackson County	101	Madison-Baraboo, WI
	Jasper County	46	Des Moines-Newton-Pella, IA
	Jefferson County	126	Peoria-Canton, IL
	Johnson County	27	Cedar Rapids, IA
	Jones County	27	Cedar Rapids, IA
	Keokuk County	27	Cedar Rapids, IA
	Kossuth County	103	Mason City, IA
	Lee County	126	Peoria-Canton, IL
	Linn County	27	Cedar Rapids, IA
	Louisa County	27	Cedar Rapids, IA
	Lucas County	46	Des Moines-Newton-Pella, IA
	Lyon County	155	Sioux Falls, SD
	Madison County	46	Des Moines-Newton-Pella, IA
	Mahaska County	46	Des Moines-Newton-Pella, IA
	Marion County	46	Des Moines-Newton-Pella, IA
	Marshall County	46	Des Moines-Newton-Pella, IA
	Mills County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Mitchell County	103	Mason City, IA
	Monona County	154	Sioux City-Vermillion, IA-NE-SD
	Monroe County	46	Des Moines-Newton-Pella, IA
	Montgomery County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Muscatine County	27	Cedar Rapids, IA
	O'Brien County	154	Sioux City-Vermillion, IA-NE-SD
	Osceola County	154	Sioux City-Vermillion, IA-NE-SD
	Page County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Palo Alto County	46	Des Moines-Newton-Pella, IA
	Plymouth County	154	Sioux City-Vermillion, IA-NE-SD
	Pocahontas County	46	Des Moines-Newton-Pella, IA
	Polk County	46	Des Moines-Newton-Pella, IA
	Pottawattamie County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Poweshiek County	46	Des Moines-Newton-Pella, IA
	Ringgold County	46	Des Moines-Newton-Pella, IA
	Sac County	46	Des Moines-Newton-Pella, IA
	Scott County	43	Davenport-Moline-Rock Island, IA-IL
	Shelby County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Sioux County	154	Sioux City-Vermillion, IA-NE-SD
	Story County	46	Des Moines-Newton-Pella, IA
	Tama County	46	Des Moines-Newton-Pella, IA
	Taylor County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Union County	46	Des Moines-Newton-Pella, IA
	Van Buren County	126	Peoria-Canton, IL
	Wapello County	46	Des Moines-Newton-Pella, IA
	Warren County	46	Des Moines-Newton-Pella, IA
	Washington County	27	Cedar Rapids, IA
	Wayne County	46	Des Moines-Newton-Pella, IA
	Webster County	46	Des Moines-Newton-Pella, IA
Iowa	Winnebago County	103	Mason City, IA
	Winneshiek County	103	Mason City, IA
	Woodbury County	154	Sioux City-Vermillion, IA-NE-SD
	Worth County	103	Mason City, IA
	Wright County	46	Des Moines-Newton-Pella, IA
	Allen County	83	Joplin, MO
	Anderson County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Atchison County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Barber County	179	Wichita-Winfield, KS
	Barton County	179	Wichita-Winfield, KS

Kansas	Bourbon County	83	Joplin, MO
	Brown County	167	Topeka, KS
	Butler County	179	Wichita-Winfield, KS
	Chase County	167	Topeka, KS
	Chautauqua County	179	Wichita-Winfield, KS
	Cherokee County	83	Joplin, MO
	Cheyenne County	141	Salina, KS
	Clark County	179	Wichita-Winfield, KS
	Clay County	167	Topeka, KS
	Cloud County	141	Salina, KS
	Coffey County	167	Topeka, KS
	Comanche County	179	Wichita-Winfield, KS
	Cowley County	179	Wichita-Winfield, KS
	Crawford County	83	Joplin, MO
	Decatur County	141	Salina, KS
	Dickinson County	167	Topeka, KS
	Doniphan County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Douglas County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Edwards County	179	Wichita-Winfield, KS
	Elk County	179	Wichita-Winfield, KS
	Ellis County	141	Salina, KS
	Ellsworth County	141	Salina, KS
	Finney County	179	Wichita-Winfield, KS
	Ford County	179	Wichita-Winfield, KS
	Franklin County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Geary County	167	Topeka, KS
	Gove County	141	Salina, KS
	Graham County	141	Salina, KS
	Grant County	179	Wichita-Winfield, KS
	Gray County	179	Wichita-Winfield, KS
	Greeley County	179	Wichita-Winfield, KS
	Greenwood County	179	Wichita-Winfield, KS
	Hamilton County	179	Wichita-Winfield, KS
	Harper County	179	Wichita-Winfield, KS
	Harvey County	179	Wichita-Winfield, KS
	Haskell County	179	Wichita-Winfield, KS
	Hodgeman County	179	Wichita-Winfield, KS
	Jackson County	167	Topeka, KS
	Jefferson County	167	Topeka, KS
	Jewell County	141	Salina, KS
	Johnson County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Kearny County	179	Wichita-Winfield, KS
	Kingman County	179	Wichita-Winfield, KS
	Kiowa County	179	Wichita-Winfield, KS
	Labette County	179	Wichita-Winfield, KS
	Lane County	179	Wichita-Winfield, KS
	Leavenworth County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Lincoln County	141	Salina, KS
	Linn County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Logan County	141	Salina, KS
	Lyon County	167	Topeka, KS
	Marion County	179	Wichita-Winfield, KS
	Marshall County	167	Topeka, KS
	McPherson County	179	Wichita-Winfield, KS
	Meade County	119	Oklahoma City-Shawnee, OK
	Miami County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Mitchell County	141	Salina, KS
	Montgomery County	179	Wichita-Winfield, KS
	Morris County	167	Topeka, KS
	Morton County	119	Oklahoma City-Shawnee, OK
	Nemaha County	167	Topeka, KS
	Neosho County	83	Joplin, MO
	Ness County	179	Wichita-Winfield, KS
	Norton County	141	Salina, KS
	Osage County	167	Topeka, KS
	Osborne County	141	Salina, KS
	Ottawa County	141	Salina, KS
	Pawnee County	179	Wichita-Winfield, KS
	Phillips County	141	Salina, KS
	Pottawatomie County	167	Topeka, KS
	Pratt County	179	Wichita-Winfield, KS
	Rawlins County	141	Salina, KS
	Reno County	179	Wichita-Winfield, KS
	Republic County	141	Salina, KS
	Rice County	179	Wichita-Winfield, KS
	Riley County	167	Topeka, KS
	Rooks County	141	Salina, KS
	Rush County	179	Wichita-Winfield, KS
	Russell County	141	Salina, KS
	Saline County	141	Salina, KS
	Scott County	179	Wichita-Winfield, KS
	Sedgwick County	179	Wichita-Winfield, KS
	Seward County	119	Oklahoma City-Shawnee, OK
	Shawnee County	167	Topeka, KS
	Sheridan County	141	Salina, KS
	Sherman County	141	Salina, KS
Kansas	Smith County	141	Salina, KS
	Stafford County	179	Wichita-Winfield, KS
	Stanton County	179	Wichita-Winfield, KS
	Stevens County	119	Oklahoma City-Shawnee, OK
	Sumner County	179	Wichita-Winfield, KS
	Thomas County	141	Salina, KS
	Trego County	141	Salina, KS
	Wabaunsee County	167	Topeka, KS
	Wallace County	141	Salina, KS
	Washington County	167	Topeka, KS
	Wichita County	179	Wichita-Winfield, KS

	Wilson County	83	Joplin, MO
	Woodson County	83	Joplin, MO
	Wyandotte County	84	Kansas City-Overland Park-Kansas City, MO-KS
Kentucky	Adair County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Allen County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Anderson County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Ballard County	122	Paducah, KY-IL
	Barren County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Bath County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Bell County	88	Knoxville-Sevierville-La Follette, TN
	Boone County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Bourbon County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Boyd County	29	Charleston, WV
	Boyle County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Bracken County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Breathitt County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Breckinridge County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Bullitt County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Butler County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Caldwell County	122	Paducah, KY-IL
	Calloway County	122	Paducah, KY-IL
	Campbell County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Carlisle County	122	Paducah, KY-IL
	Carroll County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Carter County	29	Charleston, WV
	Casey County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Christian County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Clark County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Clay County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Clinton County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Crittenden County	122	Paducah, KY-IL
	Cumberland County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Daviess County	54	Evansville, IN-KY
	Edmonson County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Elliott County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Estill County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Fayette County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Fleming County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Floyd County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Franklin County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Fulton County	105	Memphis, TN-MS-AR
	Gallatin County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Garrard County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Grant County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Graves County	122	Paducah, KY-IL
	Grayson County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Green County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Greenup County	29	Charleston, WV
	Hancock County	54	Evansville, IN-KY
	Hardin County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Harlan County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Harrison County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Hart County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Henderson County	54	Evansville, IN-KY
	Henry County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Hickman County	105	Memphis, TN-MS-AR
	Hopkins County	54	Evansville, IN-KY
	Jackson County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Jefferson County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Jessamine County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Johnson County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Kenton County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Knott County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Knox County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Larue County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Laurel County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Lawrence County	29	Charleston, WV
	Lee County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Leslie County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Letcher County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Lewis County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Lincoln County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Livingston County	122	Paducah, KY-IL
	Logan County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Lyon County	122	Paducah, KY-IL
	Madison County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Magoffin County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Marion County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Marshall County	122	Paducah, KY-IL
	Martin County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Mason County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	McCracken County	122	Paducah, KY-IL
	McCreary County	94	Lexington-Fayette--Frankfort--Richmond, KY
	McLean County	54	Evansville, IN-KY
	Meade County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Menifee County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Mercer County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Metcalf County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Monroe County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Montgomery County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Morgan County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Muhlenberg County	54	Evansville, IN-KY
	Nelson County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Nicholas County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Ohio County	54	Evansville, IN-KY
	Oldham County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Owen County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN

Kentucky	Owsley County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Pendleton County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Perry County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Pike County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Powell County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Pulaski County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Robertson County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Rockcastle County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Rowan County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Russell County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Scott County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Shelby County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Simpson County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Spencer County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Taylor County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Todd County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Trigg County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Trimble County	98	Louisville-Elizabethtown-Scottsburg, KY-IN
	Union County	54	Evansville, IN-KY
	Warren County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Washington County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Wayne County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Webster County	54	Evansville, IN-KY
	Whitley County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Wolfe County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Woodford County	94	Lexington-Fayette--Frankfort--Richmond, KY
Louisiana	Acadia Parish	90	Lafayette-Acadiana, LA
	Allen Parish	91	Lake Charles-Jennings, LA
	Ascension Parish	15	Baton Rouge-Pierre Part, LA
	Assumption Parish	15	Baton Rouge-Pierre Part, LA
	Avoyelles Parish	90	Lafayette-Acadiana, LA
	Beauregard Parish	91	Lake Charles-Jennings, LA
	Bienville Parish	153	Shreveport-Bossier City-Minden, LA
	Bossier Parish	153	Shreveport-Bossier City-Minden, LA
	Caddo Parish	153	Shreveport-Bossier City-Minden, LA
	Calcasieu Parish	91	Lake Charles-Jennings, LA
	Caldwell Parish	113	Monroe-Bastrop, LA
	Cameron Parish	91	Lake Charles-Jennings, LA
	Catahoula Parish	80	Jackson-Yazoo City, MS
	Claiborne Parish	153	Shreveport-Bossier City-Minden, LA
	Concordia Parish	80	Jackson-Yazoo City, MS
	De Soto Parish	153	Shreveport-Bossier City-Minden, LA
	East Baton Rouge Parish	15	Baton Rouge-Pierre Part, LA
	East Carroll Parish	113	Monroe-Bastrop, LA
	East Feliciana Parish	15	Baton Rouge-Pierre Part, LA
	Evangeline Parish	90	Lafayette-Acadiana, LA
	Franklin Parish	113	Monroe-Bastrop, LA
	Grant Parish	90	Lafayette-Acadiana, LA
	Iberia Parish	90	Lafayette-Acadiana, LA
	Iberville Parish	15	Baton Rouge-Pierre Part, LA
	Jackson Parish	113	Monroe-Bastrop, LA
	Jefferson Davis Parish	91	Lake Charles-Jennings, LA
	Jefferson Parish	117	New Orleans-Metairie-Bogalusa, LA
	La Salle Parish	90	Lafayette-Acadiana, LA
	Lafayette Parish	90	Lafayette-Acadiana, LA
	Lafourche Parish	117	New Orleans-Metairie-Bogalusa, LA
	Lincoln Parish	113	Monroe-Bastrop, LA
	Livingston Parish	15	Baton Rouge-Pierre Part, LA
	Madison Parish	80	Jackson-Yazoo City, MS
	Morehouse Parish	113	Monroe-Bastrop, LA
	Natchitoches Parish	153	Shreveport-Bossier City-Minden, LA
	Orleans Parish	117	New Orleans-Metairie-Bogalusa, LA
	Ouachita Parish	113	Monroe-Bastrop, LA
	Plaquemines Parish	117	New Orleans-Metairie-Bogalusa, LA
	Pointe Coupee Parish	15	Baton Rouge-Pierre Part, LA
	Rapides Parish	90	Lafayette-Acadiana, LA
	Red River Parish	153	Shreveport-Bossier City-Minden, LA
	Richland Parish	113	Monroe-Bastrop, LA
	Sabine Parish	153	Shreveport-Bossier City-Minden, LA
	St. Bernard Parish	117	New Orleans-Metairie-Bogalusa, LA
	St. Charles Parish	117	New Orleans-Metairie-Bogalusa, LA
	St. Helena Parish	15	Baton Rouge-Pierre Part, LA
	St. James Parish	117	New Orleans-Metairie-Bogalusa, LA
	St. John the Baptist Parish	117	New Orleans-Metairie-Bogalusa, LA
	St. Landry Parish	90	Lafayette-Acadiana, LA
	St. Martin Parish	90	Lafayette-Acadiana, LA
	St. Mary Parish	90	Lafayette-Acadiana, LA
	St. Tammany Parish	117	New Orleans-Metairie-Bogalusa, LA
	Tangipahoa Parish	117	New Orleans-Metairie-Bogalusa, LA
	Tensas Parish	80	Jackson-Yazoo City, MS
	Terrebonne Parish	117	New Orleans-Metairie-Bogalusa, LA
	Union Parish	113	Monroe-Bastrop, LA
	Vermilion Parish	90	Lafayette-Acadiana, LA
	Vernon Parish	91	Lake Charles-Jennings, LA
Louisiana	Washington Parish	117	New Orleans-Metairie-Bogalusa, LA
	Webster Parish	153	Shreveport-Bossier City-Minden, LA
	West Baton Rouge Parish	15	Baton Rouge-Pierre Part, LA
	West Carroll Parish	113	Monroe-Bastrop, LA
	West Feliciana Parish	15	Baton Rouge-Pierre Part, LA
	Winn Parish	153	Shreveport-Bossier City-Minden, LA
	Androscoggin County	130	Portland-Lewiston-South Portland, ME
	Aroostook County	14	Bangor, ME
	Cumberland County	130	Portland-Lewiston-South Portland, ME
	Franklin County	130	Portland-Lewiston-South Portland, ME
	Hancock County	14	Bangor, ME
	Kennebec County	130	Portland-Lewiston-South Portland, ME
	Knox County	130	Portland-Lewiston-South Portland, ME

Maine	Lincoln County	130	Portland-Lewiston-South Portland, ME
	Oxford County	130	Portland-Lewiston-South Portland, ME
	Penobscot County	14	Bangor, ME
	Piscataquis County	14	Bangor, ME
	Sagadahoc County	130	Portland-Lewiston-South Portland, ME
	Somerset County	130	Portland-Lewiston-South Portland, ME
	Waldo County	130	Portland-Lewiston-South Portland, ME
	Washington County	14	Bangor, ME
	York County	130	Portland-Lewiston-South Portland, ME
Maryland	Allegany County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Anne Arundel County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Baltimore city	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Baltimore County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Calvert County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Caroline County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Carroll County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Cecil County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Charles County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Dorchester County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Frederick County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Garrett County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Harford County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Howard County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Kent County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Montgomery County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Prince George's County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Queen Anne's County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Somerset County	49	Dover, DE
	St. Mary's County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Talbot County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Washington County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Wicomico County	49	Dover, DE
	Worcester County	49	Dover, DE
Massachusetts	Barnstable County	22	Boston-Worcester-Manchester, MA-NH
	Berkshire County	4	Albany-Schenectady-Amsterdam, NY
	Bristol County	22	Boston-Worcester-Manchester, MA-NH
	Dukes County	22	Boston-Worcester-Manchester, MA-NH
	Essex County	22	Boston-Worcester-Manchester, MA-NH
	Franklin County	72	Hartford-West Hartford-Willimantic, CT
	Hampden County	72	Hartford-West Hartford-Willimantic, CT
	Hampshire County	72	Hartford-West Hartford-Willimantic, CT
	Middlesex County	22	Boston-Worcester-Manchester, MA-NH
	Nantucket County	22	Boston-Worcester-Manchester, MA-NH
	Norfolk County	22	Boston-Worcester-Manchester, MA-NH
	Plymouth County	22	Boston-Worcester-Manchester, MA-NH
	Suffolk County	22	Boston-Worcester-Manchester, MA-NH
	Worcester County	22	Boston-Worcester-Manchester, MA-NH
Michigan	Alcona County	47	Detroit-Warren-Flint, MI
	Alger County	102	Marinette, WI-MI
	Allegan County	64	Grand Rapids-Muskegon-Holland, MI
	Alpena County	6	Alpena, MI
	Antrim County	6	Alpena, MI
	Arenac County	47	Detroit-Warren-Flint, MI
	Baraga County	102	Marinette, WI-MI
	Barry County	64	Grand Rapids-Muskegon-Holland, MI
	Bay County	47	Detroit-Warren-Flint, MI
	Benzie County	168	Traverse City, MI
	Berrien County	156	South Bend-Mishawaka, IN-MI
	Branch County	60	Fort Wayne-Huntington-Auburn, IN
	Calhoun County	64	Grand Rapids-Muskegon-Holland, MI
	Cass County	156	South Bend-Mishawaka, IN-MI
	Charlevoix County	6	Alpena, MI
	Cheboygan County	6	Alpena, MI
	Chippewa County	102	Marinette, WI-MI
	Clare County	47	Detroit-Warren-Flint, MI
	Clinton County	47	Detroit-Warren-Flint, MI
	Crawford County	6	Alpena, MI
	Delta County	102	Marinette, WI-MI
	Dickinson County	102	Marinette, WI-MI
	Eaton County	47	Detroit-Warren-Flint, MI
	Emmet County	6	Alpena, MI
	Genesee County	47	Detroit-Warren-Flint, MI
	Gladwin County	47	Detroit-Warren-Flint, MI
	Gogebic County	176	Wausau-Merrill, WI
	Grand Traverse County	168	Traverse City, MI
	Gratiot County	47	Detroit-Warren-Flint, MI
	Hillsdale County	47	Detroit-Warren-Flint, MI
	Houghton County	102	Marinette, WI-MI
	Huron County	47	Detroit-Warren-Flint, MI
	Ingham County	47	Detroit-Warren-Flint, MI
	Ionia County	64	Grand Rapids-Muskegon-Holland, MI
	Iosco County	47	Detroit-Warren-Flint, MI
	Iron County	102	Marinette, WI-MI
	Isabella County	47	Detroit-Warren-Flint, MI
	Jackson County	47	Detroit-Warren-Flint, MI
	Kalamazoo County	64	Grand Rapids-Muskegon-Holland, MI
	Kalkaska County	168	Traverse City, MI
	Kent County	64	Grand Rapids-Muskegon-Holland, MI
	Keweenaw County	102	Marinette, WI-MI
	Lake County	168	Traverse City, MI
	Lapeer County	47	Detroit-Warren-Flint, MI
	Leelanau County	168	Traverse City, MI
	Lenawee County	47	Detroit-Warren-Flint, MI
	Livingston County	47	Detroit-Warren-Flint, MI
	Luce County	102	Marinette, WI-MI
	Mackinac County	102	Marinette, WI-MI
	Macomb County	47	Detroit-Warren-Flint, MI

Michigan	Manistee County	168	Traverse City, MI
	Marquette County	102	Marinette, WI-MI
	Mason County	168	Traverse City, MI
	Mecosta County	64	Grand Rapids-Muskegon-Holland, MI
	Menominee County	102	Marinette, WI-MI
	Midland County	47	Detroit-Warren-Flint, MI
	Missaukee County	168	Traverse City, MI
	Monroe County	47	Detroit-Warren-Flint, MI
	Montcalm County	64	Grand Rapids-Muskegon-Holland, MI
	Montmorency County	6	Alpena, MI
	Muskegon County	64	Grand Rapids-Muskegon-Holland, MI
	Newaygo County	64	Grand Rapids-Muskegon-Holland, MI
	Oakland County	47	Detroit-Warren-Flint, MI
	Oceana County	64	Grand Rapids-Muskegon-Holland, MI
	Ogemaw County	47	Detroit-Warren-Flint, MI
	Ontonagon County	176	Wausau-Merrill, WI
	Osceola County	168	Traverse City, MI
	Oscoda County	6	Alpena, MI
	Otsego County	6	Alpena, MI
	Ottawa County	64	Grand Rapids-Muskegon-Holland, MI
	Presque Isle County	6	Alpena, MI
	Roscommon County	6	Alpena, MI
	Saginaw County	47	Detroit-Warren-Flint, MI
	Sanilac County	47	Detroit-Warren-Flint, MI
	Schoolcraft County	102	Marinette, WI-MI
	Shiawassee County	47	Detroit-Warren-Flint, MI
	St. Clair County	47	Detroit-Warren-Flint, MI
	St. Joseph County	156	South Bend-Mishawaka, IN-MI
	Tuscola County	47	Detroit-Warren-Flint, MI
	Van Buren County	64	Grand Rapids-Muskegon-Holland, MI
	Washtenaw County	47	Detroit-Warren-Flint, MI
	Wayne County	47	Detroit-Warren-Flint, MI
	Wexford County	168	Traverse City, MI
Minnesota	Aitkin County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Anoka County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Becker County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Beltrami County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Benton County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Big Stone County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Blue Earth County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Brown County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Carlton County	50	Duluth, MN-WI
	Carver County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Cass County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Chippewa County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Chisago County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Clay County	55	Fargo-Wahpeton, ND-MN
	Clearwater County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Cook County	50	Duluth, MN-WI
	Cottonwood County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Crow Wing County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Dakota County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Dodge County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Douglas County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Faribault County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Fillmore County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Freeborn County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Goodhue County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Grant County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Hennepin County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Houston County	89	La Crosse, WI-MN
	Hubbard County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Isanti County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Itasca County	50	Duluth, MN-WI
	Jackson County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Kanabec County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Kandiyohi County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Kittson County	63	Grand Forks, ND-MN
	Koochiching County	50	Duluth, MN-WI
	Lac qui Parle County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Lake County	50	Duluth, MN-WI
	Lake of the Woods County	63	Grand Forks, ND-MN
	Le Sueur County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Lincoln County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Lyon County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Mahnomen County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Marshall County	63	Grand Forks, ND-MN
	Martin County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	McLeod County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Meeker County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Mille Lacs County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Morrison County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Mower County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Murray County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Nicollet County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Nobles County	155	Sioux Falls, SD
	Norman County	55	Fargo-Wahpeton, ND-MN
	Olmsted County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Otter Tail County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Pennington County	63	Grand Forks, ND-MN
	Pine County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Pipestone County	155	Sioux Falls, SD
	Polk County	63	Grand Forks, ND-MN
	Pope County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Ramsey County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Red Lake County	63	Grand Forks, ND-MN
	Redwood County	109	Minneapolis-St. Paul-St. Cloud, MN-WI

Minnesota	Renville County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Rice County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Rock County	155	Sioux Falls, SD
	Roseau County	63	Grand Forks, ND-MN
	Scott County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Sherburne County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Sibley County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	St. Louis County	50	Duluth, MN-WI
	Stearns County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Steele County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Stevens County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Swift County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Todd County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Traverse County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Wabasha County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Wadena County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Waseca County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Washington County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Watsonwan County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Wilkin County	55	Fargo-Wahpeton, ND-MN
	Winona County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Wright County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Yellow Medicine County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
Mississippi	Adams County	80	Jackson-Yazoo City, MS
	Alcorn County	171	Tupelo, MS
	Amite County	80	Jackson-Yazoo City, MS
	Attala County	80	Jackson-Yazoo City, MS
	Benton County	105	Memphis, TN-MS-AR
	Bolivar County	80	Jackson-Yazoo City, MS
	Calhoun County	171	Tupelo, MS
	Carroll County	80	Jackson-Yazoo City, MS
	Chickasaw County	171	Tupelo, MS
	Choctaw County	171	Tupelo, MS
	Claiborne County	80	Jackson-Yazoo City, MS
	Clarke County	80	Jackson-Yazoo City, MS
	Clay County	171	Tupelo, MS
	Coahoma County	105	Memphis, TN-MS-AR
	Copiah County	80	Jackson-Yazoo City, MS
	Covington County	80	Jackson-Yazoo City, MS
	DeSoto County	105	Memphis, TN-MS-AR
	Forrest County	80	Jackson-Yazoo City, MS
	Franklin County	80	Jackson-Yazoo City, MS
	George County	69	Gulfport-Biloxi-Pascagoula, MS
	Greene County	80	Jackson-Yazoo City, MS
	Grenada County	80	Jackson-Yazoo City, MS
	Hancock County	69	Gulfport-Biloxi-Pascagoula, MS
	Harrison County	69	Gulfport-Biloxi-Pascagoula, MS
	Hinds County	80	Jackson-Yazoo City, MS
	Holmes County	80	Jackson-Yazoo City, MS
	Humphreys County	80	Jackson-Yazoo City, MS
	Issaquena County	80	Jackson-Yazoo City, MS
	Itawamba County	171	Tupelo, MS
	Jackson County	69	Gulfport-Biloxi-Pascagoula, MS
	Jasper County	80	Jackson-Yazoo City, MS
	Jefferson County	80	Jackson-Yazoo City, MS
	Jefferson Davis County	80	Jackson-Yazoo City, MS
	Jones County	80	Jackson-Yazoo City, MS
	Kemper County	80	Jackson-Yazoo City, MS
	Lafayette County	105	Memphis, TN-MS-AR
	Lamar County	80	Jackson-Yazoo City, MS
	Lauderdale County	80	Jackson-Yazoo City, MS
	Lawrence County	80	Jackson-Yazoo City, MS
	Leake County	80	Jackson-Yazoo City, MS
	Lee County	171	Tupelo, MS
	Leflore County	80	Jackson-Yazoo City, MS
	Lincoln County	80	Jackson-Yazoo City, MS
	Lowndes County	171	Tupelo, MS
	Madison County	80	Jackson-Yazoo City, MS
	Marion County	80	Jackson-Yazoo City, MS
	Marshall County	105	Memphis, TN-MS-AR
	Monroe County	171	Tupelo, MS
	Montgomery County	80	Jackson-Yazoo City, MS
	Neshoba County	80	Jackson-Yazoo City, MS
	Newton County	80	Jackson-Yazoo City, MS
	Noxubee County	171	Tupelo, MS
	Oktibbeha County	171	Tupelo, MS
	Panola County	105	Memphis, TN-MS-AR
	Pearl River County	117	New Orleans-Metairie-Bogalusa, LA
	Perry County	80	Jackson-Yazoo City, MS
	Pike County	80	Jackson-Yazoo City, MS
	Pontotoc County	171	Tupelo, MS
Mississippi	Prentiss County	171	Tupelo, MS
	Quitman County	105	Memphis, TN-MS-AR
	Rankin County	80	Jackson-Yazoo City, MS
	Scott County	80	Jackson-Yazoo City, MS
	Sharkey County	80	Jackson-Yazoo City, MS
	Simpson County	80	Jackson-Yazoo City, MS
	Smith County	80	Jackson-Yazoo City, MS
	Stone County	69	Gulfport-Biloxi-Pascagoula, MS
	Sunflower County	80	Jackson-Yazoo City, MS
	Tallahatchie County	105	Memphis, TN-MS-AR
	Tate County	105	Memphis, TN-MS-AR
	Tippah County	171	Tupelo, MS
	Tishomingo County	171	Tupelo, MS
	Tunica County	105	Memphis, TN-MS-AR
	Union County	171	Tupelo, MS
	Walthall County	80	Jackson-Yazoo City, MS

	Warren County	80	Jackson-Yazoo City, MS
	Washington County	80	Jackson-Yazoo City, MS
	Wayne County	80	Jackson-Yazoo City, MS
	Webster County	171	Tupelo, MS
	Wilkinson County	15	Baton Rouge-Pierre Part, LA
	Winston County	80	Jackson-Yazoo City, MS
	Yalobusha County	105	Memphis, TN-MS-AR
	Yazoo County	80	Jackson-Yazoo City, MS
Missouri	Adair County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Andrew County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Atchison County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Audrain County	37	Columbia, MO
	Barry County	159	Springfield, MO
	Barton County	83	Joplin, MO
	Bates County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Benton County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Bollinger County	25	Cape Girardeau-Jackson, MO-IL
	Boone County	37	Columbia, MO
	Buchanan County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Butler County	25	Cape Girardeau-Jackson, MO-IL
	Caldwell County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Callaway County	37	Columbia, MO
	Camden County	37	Columbia, MO
	Cape Girardeau County	25	Cape Girardeau-Jackson, MO-IL
	Carroll County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Carter County	25	Cape Girardeau-Jackson, MO-IL
	Cass County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Cedar County	83	Joplin, MO
	Chariton County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Christian County	159	Springfield, MO
	Clark County	126	Peoria-Canton, IL
	Clay County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Clinton County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Cole County	37	Columbia, MO
	Cooper County	37	Columbia, MO
	Crawford County	160	St. Louis-St. Charles-Farmington, MO-IL
	Dade County	159	Springfield, MO
	Dallas County	159	Springfield, MO
	Daviess County	84	Kansas City-Overland Park-Kansas City, MO-KS
	DeKalb County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Dent County	159	Springfield, MO
	Douglas County	159	Springfield, MO
	Dunklin County	82	Jonesboro, AR
	Franklin County	160	St. Louis-St. Charles-Farmington, MO-IL
	Gasconade County	160	St. Louis-St. Charles-Farmington, MO-IL
	Gentry County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Greene County	159	Springfield, MO
	Grundy County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Harrison County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Henry County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Hickory County	159	Springfield, MO
	Holt County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Howard County	37	Columbia, MO
	Howell County	159	Springfield, MO
	Iron County	160	St. Louis-St. Charles-Farmington, MO-IL
	Jackson County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Jasper County	83	Joplin, MO
	Jefferson County	160	St. Louis-St. Charles-Farmington, MO-IL
	Johnson County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Knox County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Laclede County	159	Springfield, MO
	Lafayette County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Lawrence County	159	Springfield, MO
	Lewis County	158	Springfield, IL
	Lincoln County	160	St. Louis-St. Charles-Farmington, MO-IL
	Linn County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Livingston County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Macon County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Madison County	160	St. Louis-St. Charles-Farmington, MO-IL
	Maries County	37	Columbia, MO
	Marion County	158	Springfield, IL
	McDonald County	57	Fayetteville-Springdale-Rogers, AR-MO
	Mercer County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Miller County	37	Columbia, MO
	Mississippi County	25	Cape Girardeau-Jackson, MO-IL
	Moniteau County	37	Columbia, MO
	Monroe County	37	Columbia, MO
	Montgomery County	160	St. Louis-St. Charles-Farmington, MO-IL
	Morgan County	37	Columbia, MO
	New Madrid County	25	Cape Girardeau-Jackson, MO-IL
	Newton County	83	Joplin, MO
	Nodaway County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Oregon County	159	Springfield, MO
	Osage County	37	Columbia, MO
	Ozark County	159	Springfield, MO
	Pemiscot County	82	Jonesboro, AR
	Perry County	25	Cape Girardeau-Jackson, MO-IL
	Pettis County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Phelps County	159	Springfield, MO
	Pike County	160	St. Louis-St. Charles-Farmington, MO-IL
	Platte County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Polk County	159	Springfield, MO
	Pulaski County	159	Springfield, MO
	Putnam County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Ralls County	158	Springfield, IL
	Randolph County	37	Columbia, MO
	Rav County	84	Kansas City-Overland Park-Kansas City, MO-KS

Missouri	Reynolds County	160	St. Louis-St. Charles-Farmington, MO-IL
	Ripley County	25	Cape Girardeau-Jackson, MO-IL
	Saline County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Schuyler County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Scotland County	126	Peoria-Canton, IL
	Scott County	25	Cape Girardeau-Jackson, MO-IL
	Shannon County	159	Springfield, MO
	Shelby County	37	Columbia, MO
	St. Charles County	160	St. Louis-St. Charles-Farmington, MO-IL
	St. Clair County	84	Kansas City-Overland Park-Kansas City, MO-KS
	St. Francois County	160	St. Louis-St. Charles-Farmington, MO-IL
	St. Louis city	160	St. Louis-St. Charles-Farmington, MO-IL
	St. Louis County	160	St. Louis-St. Charles-Farmington, MO-IL
	Ste. Genevieve County	160	St. Louis-St. Charles-Farmington, MO-IL
	Stoddard County	25	Cape Girardeau-Jackson, MO-IL
	Stone County	159	Springfield, MO
	Sullivan County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Taney County	159	Springfield, MO
	Texas County	159	Springfield, MO
	Vernon County	83	Joplin, MO
	Warren County	160	St. Louis-St. Charles-Farmington, MO-IL
	Washington County	160	St. Louis-St. Charles-Farmington, MO-IL
	Wayne County	25	Cape Girardeau-Jackson, MO-IL
	Webster County	159	Springfield, MO
	Worth County	84	Kansas City-Overland Park-Kansas City, MO-KS
	Wright County	159	Springfield, MO
Montana	Beaverhead County	73	Helena, MT
	Big Horn County	18	Billings, MT
	Blaine County	65	Great Falls, MT
	Broadwater County	73	Helena, MT
	Carbon County	18	Billings, MT
	Carter County	18	Billings, MT
	Cascade County	65	Great Falls, MT
	Chouteau County	65	Great Falls, MT
	Custer County	18	Billings, MT
	Daniels County	18	Billings, MT
	Dawson County	18	Billings, MT
	Deer Lodge County	73	Helena, MT
	Fallon County	18	Billings, MT
	Fergus County	18	Billings, MT
	Flathead County	111	Missoula, MT
	Gallatin County	73	Helena, MT
	Garfield County	18	Billings, MT
	Glacier County	65	Great Falls, MT
	Golden Valley County	18	Billings, MT
	Granite County	73	Helena, MT
	Hill County	65	Great Falls, MT
	Jefferson County	73	Helena, MT
	Judith Basin County	18	Billings, MT
	Lake County	111	Missoula, MT
	Lewis and Clark County	73	Helena, MT
	Liberty County	65	Great Falls, MT
	Lincoln County	111	Missoula, MT
	Madison County	73	Helena, MT
	McCone County	18	Billings, MT
	Meagher County	73	Helena, MT
	Mineral County	111	Missoula, MT
	Missoula County	111	Missoula, MT
	Musselshell County	18	Billings, MT
	Park County	73	Helena, MT
	Petroleum County	18	Billings, MT
	Phillips County	65	Great Falls, MT
	Pondera County	65	Great Falls, MT
	Powder River County	18	Billings, MT
	Powell County	73	Helena, MT
	Prairie County	18	Billings, MT
	Ravalli County	111	Missoula, MT
	Richland County	18	Billings, MT
	Roosevelt County	18	Billings, MT
	Rosebud County	18	Billings, MT
	Sanders County	111	Missoula, MT
	Sheridan County	18	Billings, MT
	Silver Bow County	73	Helena, MT
	Stillwater County	18	Billings, MT
	Sweet Grass County	18	Billings, MT
	Teton County	65	Great Falls, MT
	Toole County	65	Great Falls, MT
	Treasure County	18	Billings, MT
	Valley County	18	Billings, MT
Montana	Wheatland County	73	Helena, MT
	Wibaux County	18	Billings, MT
	Yellowstone County	18	Billings, MT
	Adams County	85	Kearney, NE
	Antelope County	154	Sioux City-Vermillion, IA-NE-SD
	Arthur County	85	Kearney, NE
	Banner County	150	Scotts Bluff, NE
	Blaine County	85	Kearney, NE
	Boone County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Box Butte County	150	Scotts Bluff, NE
	Boyd County	154	Sioux City-Vermillion, IA-NE-SD
	Brown County	134	Rapid City, SD
	Buffalo County	85	Kearney, NE
	Burt County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Butler County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Cass County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Cedar County	154	Sioux City-Vermillion, IA-NE-SD
	Chase County	85	Kearney, NE

Nebraska	Cherry County	134	Rapid City, SD
	Cheyenne County	150	Scotts Bluff, NE
	Clay County	85	Kearney, NE
	Colfax County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Cuming County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Custer County	85	Kearney, NE
	Dakota County	154	Sioux City-Vermillion, IA-NE-SD
	Dawes County	134	Rapid City, SD
	Dawson County	85	Kearney, NE
	Deuel County	150	Scotts Bluff, NE
	Dixon County	154	Sioux City-Vermillion, IA-NE-SD
	Dodge County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Douglas County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Dundy County	85	Kearney, NE
	Fillmore County	95	Lincoln, NE
	Franklin County	85	Kearney, NE
	Frontier County	85	Kearney, NE
	Furnas County	85	Kearney, NE
	Gage County	95	Lincoln, NE
	Garden County	150	Scotts Bluff, NE
	Garfield County	85	Kearney, NE
	Gosper County	85	Kearney, NE
	Grant County	134	Rapid City, SD
	Greeley County	85	Kearney, NE
	Hall County	85	Kearney, NE
	Hamilton County	85	Kearney, NE
	Harlan County	85	Kearney, NE
	Hayes County	85	Kearney, NE
	Hitchcock County	85	Kearney, NE
	Holt County	154	Sioux City-Vermillion, IA-NE-SD
	Hooker County	85	Kearney, NE
	Howard County	85	Kearney, NE
	Jefferson County	95	Lincoln, NE
	Johnson County	95	Lincoln, NE
	Kearney County	85	Kearney, NE
	Keith County	85	Kearney, NE
	Keya Paha County	134	Rapid City, SD
	Kimball County	150	Scotts Bluff, NE
	Knox County	154	Sioux City-Vermillion, IA-NE-SD
	Lancaster County	95	Lincoln, NE
	Lincoln County	85	Kearney, NE
	Logan County	85	Kearney, NE
	Loup County	85	Kearney, NE
	Madison County	154	Sioux City-Vermillion, IA-NE-SD
	McPherson County	85	Kearney, NE
	Merrick County	85	Kearney, NE
	Morrill County	150	Scotts Bluff, NE
	Nance County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Nemaha County	95	Lincoln, NE
	Nuckolls County	85	Kearney, NE
	Otoe County	95	Lincoln, NE
	Pawnee County	95	Lincoln, NE
	Perkins County	85	Kearney, NE
	Phelps County	85	Kearney, NE
	Pierce County	154	Sioux City-Vermillion, IA-NE-SD
	Platte County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Polk County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Red Willow County	85	Kearney, NE
	Richardson County	95	Lincoln, NE
	Rock County	134	Rapid City, SD
	Saline County	95	Lincoln, NE
	Sarpy County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Saunders County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Scotts Bluff County	150	Scotts Bluff, NE
	Seward County	95	Lincoln, NE
	Sheridan County	150	Scotts Bluff, NE
	Sherman County	85	Kearney, NE
	Sioux County	150	Scotts Bluff, NE
	Stanton County	154	Sioux City-Vermillion, IA-NE-SD
	Thayer County	95	Lincoln, NE
	Thomas County	85	Kearney, NE
	Thurston County	154	Sioux City-Vermillion, IA-NE-SD
	Valley County	85	Kearney, NE
	Washington County	120	Omaha-Council Bluffs-Fremont, NE-IA
	Wayne County	154	Sioux City-Vermillion, IA-NE-SD
	Webster County	85	Kearney, NE
	Wheeler County	154	Sioux City-Vermillion, IA-NE-SD
	York County	95	Lincoln, NE
Nevada	Carson City	136	Reno-Sparks, NV
	Churchill County	136	Reno-Sparks, NV
	Clark County	92	Las Vegas-Paradise-Pahrump, NV
	Douglas County	140	Sacramento--Arden-Arcade--Truckee, CA-NV
	Elko County	136	Reno-Sparks, NV
	Esmeralda County	92	Las Vegas-Paradise-Pahrump, NV
	Eureka County	136	Reno-Sparks, NV
	Humboldt County	136	Reno-Sparks, NV
	Lander County	136	Reno-Sparks, NV
	Lincoln County	92	Las Vegas-Paradise-Pahrump, NV
	Lyon County	136	Reno-Sparks, NV
	Mineral County	136	Reno-Sparks, NV
	Nye County	92	Las Vegas-Paradise-Pahrump, NV
	Pershing County	136	Reno-Sparks, NV
	Storey County	136	Reno-Sparks, NV
	Washoe County	136	Reno-Sparks, NV
	White Pine County	136	Reno-Sparks, NV
	Belknap County	22	Boston-Worcester-Manchester, MA-NH
	Carroll County	22	Boston-Worcester-Manchester, MA-NH

New Hampshire	Cheshire County	22	Boston-Worcester-Manchester, MA-NH
	Coos County	22	Boston-Worcester-Manchester, MA-NH
	Grafton County	22	Boston-Worcester-Manchester, MA-NH
	Hillsborough County	22	Boston-Worcester-Manchester, MA-NH
	Merrimack County	22	Boston-Worcester-Manchester, MA-NH
	Rockingham County	22	Boston-Worcester-Manchester, MA-NH
	Strafford County	22	Boston-Worcester-Manchester, MA-NH
New Jersey	Sullivan County	22	Boston-Worcester-Manchester, MA-NH
	Atlantic County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Bergen County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Burlington County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Camden County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Cape May County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Cumberland County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Essex County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Gloucester County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Hudson County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Hunterdon County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Mercer County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Middlesex County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Monmouth County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Morris County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Ocean County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Passaic County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Salem County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Somerset County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Sussex County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Union County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Warren County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
New Mexico	Bernalillo County	5	Albuquerque, NM
	Catron County	128	Phoenix-Mesa-Scottsdale, AZ
	Chaves County	107	Midland-Odessa, TX
	Cibola County	5	Albuquerque, NM
	Colfax County	132	Pueblo, CO
	Curry County	7	Amarillo, TX
	De Baca County	7	Amarillo, TX
	Dona Ana County	51	El Paso, TX
	Eddy County	107	Midland-Odessa, TX
	Grant County	51	El Paso, TX
	Guadalupe County	147	Santa Fe-Espanola, NM
	Harding County	7	Amarillo, TX
	Hidalgo County	128	Phoenix-Mesa-Scottsdale, AZ
	Lea County	107	Midland-Odessa, TX
	Lincoln County	51	El Paso, TX
	Los Alamos County	147	Santa Fe-Espanola, NM
	Luna County	51	El Paso, TX
	McKinley County	128	Phoenix-Mesa-Scottsdale, AZ
	Mora County	147	Santa Fe-Espanola, NM
	Otero County	51	El Paso, TX
	Quay County	7	Amarillo, TX
	Rio Arriba County	147	Santa Fe-Espanola, NM
	Roosevelt County	7	Amarillo, TX
	San Juan County	56	Farmington, NM
	San Miguel County	147	Santa Fe-Espanola, NM
	Sandoval County	5	Albuquerque, NM
	Santa Fe County	147	Santa Fe-Espanola, NM
	Sierra County	51	El Paso, TX
	Socorro County	5	Albuquerque, NM
	Taos County	147	Santa Fe-Espanola, NM
	Torrance County	5	Albuquerque, NM
	Union County	7	Amarillo, TX
	Valencia County	5	Albuquerque, NM
New York	Albany County	4	Albany-Schenectady-Amsterdam, NY
	Allegany County	23	Buffalo-Niagara-Cattaraugus, NY
	Bronx County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Broome County	162	Syracuse-Auburn, NY
	Cattaraugus County	23	Buffalo-Niagara-Cattaraugus, NY
	Cayuga County	162	Syracuse-Auburn, NY
	Chautauqua County	23	Buffalo-Niagara-Cattaraugus, NY
	Chemung County	139	Rochester-Batavia-Seneca Falls, NY
	Chenango County	162	Syracuse-Auburn, NY
	Clinton County	162	Syracuse-Auburn, NY
	Columbia County	4	Albany-Schenectady-Amsterdam, NY
	Cortland County	162	Syracuse-Auburn, NY
	Delaware County	162	Syracuse-Auburn, NY
	Dutchess County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Erie County	23	Buffalo-Niagara-Cattaraugus, NY
	Essex County	162	Syracuse-Auburn, NY
	Franklin County	162	Syracuse-Auburn, NY
	Fulton County	4	Albany-Schenectady-Amsterdam, NY
	Genesee County	139	Rochester-Batavia-Seneca Falls, NY
	Greene County	4	Albany-Schenectady-Amsterdam, NY
	Hamilton County	4	Albany-Schenectady-Amsterdam, NY
	Herkimer County	162	Syracuse-Auburn, NY
	Jefferson County	162	Syracuse-Auburn, NY
	Kings County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Lewis County	162	Syracuse-Auburn, NY
	Livingston County	139	Rochester-Batavia-Seneca Falls, NY
	Madison County	162	Syracuse-Auburn, NY
	Monroe County	139	Rochester-Batavia-Seneca Falls, NY
	Montgomery County	4	Albany-Schenectady-Amsterdam, NY
	Nassau County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	New York County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Niagara County	23	Buffalo-Niagara-Cattaraugus, NY
	Oneida County	162	Syracuse-Auburn, NY
	Onondaga County	162	Syracuse-Auburn, NY
	Ontario County	139	Rochester-Batavia-Seneca Falls, NY

New York	Orange County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Orleans County	139	Rochester-Batavia-Seneca Falls, NY
	Oswego County	162	Syracuse-Auburn, NY
	Otsego County	162	Syracuse-Auburn, NY
	Putnam County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Queens County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Rensselaer County	4	Albany-Schenectady-Amsterdam, NY
	Richmond County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Rockland County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Saratoga County	4	Albany-Schenectady-Amsterdam, NY
	Schenectady County	4	Albany-Schenectady-Amsterdam, NY
	Schoharie County	4	Albany-Schenectady-Amsterdam, NY
	Schuyler County	139	Rochester-Batavia-Seneca Falls, NY
	Seneca County	139	Rochester-Batavia-Seneca Falls, NY
	St. Lawrence County	162	Syracuse-Auburn, NY
	Steuben County	139	Rochester-Batavia-Seneca Falls, NY
	Suffolk County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Sullivan County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Tioga County	162	Syracuse-Auburn, NY
	Tompkins County	162	Syracuse-Auburn, NY
	Ulster County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Warren County	4	Albany-Schenectady-Amsterdam, NY
	Washington County	4	Albany-Schenectady-Amsterdam, NY
	Wayne County	139	Rochester-Batavia-Seneca Falls, NY
	Westchester County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Wyoming County	139	Rochester-Batavia-Seneca Falls, NY
	Yates County	139	Rochester-Batavia-Seneca Falls, NY
North Carolina	Alamance County	66	Greensboro--Winston-Salem--High Point, NC
	Alexander County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Alleghany County	66	Greensboro--Winston-Salem--High Point, NC
	Anson County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Ashe County	10	Asheville-Brevard, NC
	Avery County	10	Asheville-Brevard, NC
	Beaufort County	67	Greenville, NC
	Bertie County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Bladen County	133	Raleigh-Durham-Cary, NC
	Brunswick County	115	Myrtle Beach-Conway-Georgetown, SC
	Buncombe County	10	Asheville-Brevard, NC
	Burke County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Cabarrus County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Caldwell County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Camden County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Carteret County	67	Greenville, NC
	Caswell County	66	Greensboro--Winston-Salem--High Point, NC
	Catawba County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Chatham County	133	Raleigh-Durham-Cary, NC
	Cherokee County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Chowan County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Clay County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Cleveland County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Columbus County	115	Myrtle Beach-Conway-Georgetown, SC
	Craven County	67	Greenville, NC
	Cumberland County	133	Raleigh-Durham-Cary, NC
	Currituck County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Dare County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Davidson County	66	Greensboro--Winston-Salem--High Point, NC
	Davie County	66	Greensboro--Winston-Salem--High Point, NC
	Duplin County	133	Raleigh-Durham-Cary, NC
	Durham County	133	Raleigh-Durham-Cary, NC
	Edgecombe County	133	Raleigh-Durham-Cary, NC
	Forsyth County	66	Greensboro--Winston-Salem--High Point, NC
	Franklin County	133	Raleigh-Durham-Cary, NC
	Gaston County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Gates County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Graham County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Granville County	133	Raleigh-Durham-Cary, NC
	Greene County	67	Greenville, NC
	Guilford County	66	Greensboro--Winston-Salem--High Point, NC
	Halifax County	133	Raleigh-Durham-Cary, NC
	Harnett County	133	Raleigh-Durham-Cary, NC
	Haywood County	10	Asheville-Brevard, NC
	Henderson County	10	Asheville-Brevard, NC
	Hertford County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Hoke County	133	Raleigh-Durham-Cary, NC
	Hyde County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Iredell County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Jackson County	10	Asheville-Brevard, NC
	Johnston County	133	Raleigh-Durham-Cary, NC
	Jones County	67	Greenville, NC
	Lee County	133	Raleigh-Durham-Cary, NC
	Lenoir County	67	Greenville, NC
	Lincoln County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Macon County	10	Asheville-Brevard, NC
	Madison County	10	Asheville-Brevard, NC
	Martin County	67	Greenville, NC
	McDowell County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Mecklenburg County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Mitchell County	10	Asheville-Brevard, NC
	Montgomery County	66	Greensboro--Winston-Salem--High Point, NC
	Moore County	133	Raleigh-Durham-Cary, NC
	Nash County	133	Raleigh-Durham-Cary, NC
	New Hanover County	115	Myrtle Beach-Conway-Georgetown, SC
	Northampton County	133	Raleigh-Durham-Cary, NC
	Onslow County	67	Greenville, NC
	Orange County	133	Raleigh-Durham-Cary, NC
	Pamlico County	67	Greenville, NC
	Pasquotank County	173	Virginia Beach-Norfolk-Newport News, VA-NC

North Carolina	Pender County	115	Myrtle Beach-Conway-Georgetown, SC
	Perquimans County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Person County	133	Raleigh-Durham-Cary, NC
	Pitt County	67	Greenville, NC
	Polk County	68	Greenville-Spartanburg-Anderson, SC
	Randolph County	66	Greensboro--Winston-Salem--High Point, NC
	Richmond County	133	Raleigh-Durham-Cary, NC
	Robeson County	133	Raleigh-Durham-Cary, NC
	Rockingham County	66	Greensboro--Winston-Salem--High Point, NC
	Rowan County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Rutherford County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Sampson County	133	Raleigh-Durham-Cary, NC
	Scotland County	133	Raleigh-Durham-Cary, NC
	Stanly County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Stokes County	66	Greensboro--Winston-Salem--High Point, NC
	Surry County	66	Greensboro--Winston-Salem--High Point, NC
	Swain County	10	Asheville-Brevard, NC
	Transylvania County	10	Asheville-Brevard, NC
	Tyrrell County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Union County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Vance County	133	Raleigh-Durham-Cary, NC
	Wake County	133	Raleigh-Durham-Cary, NC
	Warren County	133	Raleigh-Durham-Cary, NC
	Washington County	67	Greenville, NC
	Watauga County	10	Asheville-Brevard, NC
	Wayne County	133	Raleigh-Durham-Cary, NC
	Wilkes County	66	Greensboro--Winston-Salem--High Point, NC
	Wilson County	133	Raleigh-Durham-Cary, NC
	Yadkin County	66	Greensboro--Winston-Salem--High Point, NC
	Yancey County	10	Asheville-Brevard, NC
North Dakota	Adams County	1	Aberdeen, SD
	Barnes County	55	Fargo-Wahpeton, ND-MN
	Benson County	63	Grand Forks, ND-MN
	Billings County	20	Bismarck, ND
	Bottineau County	110	Minot, ND
	Bowman County	20	Bismarck, ND
	Burke County	110	Minot, ND
	Burleigh County	20	Bismarck, ND
	Cass County	55	Fargo-Wahpeton, ND-MN
	Cavalier County	63	Grand Forks, ND-MN
	Dickey County	55	Fargo-Wahpeton, ND-MN
	Divide County	110	Minot, ND
	Dunn County	20	Bismarck, ND
	Eddy County	63	Grand Forks, ND-MN
	Emmons County	20	Bismarck, ND
	Foster County	55	Fargo-Wahpeton, ND-MN
	Golden Valley County	18	Billings, MT
	Grand Forks County	63	Grand Forks, ND-MN
	Grant County	20	Bismarck, ND
	Griggs County	55	Fargo-Wahpeton, ND-MN
	Hettinger County	20	Bismarck, ND
	Kidder County	20	Bismarck, ND
	LaMoure County	55	Fargo-Wahpeton, ND-MN
	Logan County	20	Bismarck, ND
	McHenry County	110	Minot, ND
	McIntosh County	20	Bismarck, ND
	McKenzie County	110	Minot, ND
	McLean County	20	Bismarck, ND
	Mercer County	20	Bismarck, ND
	Morton County	20	Bismarck, ND
	Mountrail County	110	Minot, ND
	Nelson County	63	Grand Forks, ND-MN
	Oliver County	20	Bismarck, ND
	Pembina County	63	Grand Forks, ND-MN
	Pierce County	110	Minot, ND
	Ramsey County	63	Grand Forks, ND-MN
	Ransom County	55	Fargo-Wahpeton, ND-MN
	Renville County	110	Minot, ND
	Richland County	55	Fargo-Wahpeton, ND-MN
	Rolette County	110	Minot, ND
	Sargent County	55	Fargo-Wahpeton, ND-MN
	Sheridan County	55	Fargo-Wahpeton, ND-MN
	Sioux County	1	Aberdeen, SD
	Slope County	20	Bismarck, ND
	Stark County	20	Bismarck, ND
North Dakota	Steele County	63	Grand Forks, ND-MN
	Stutsman County	55	Fargo-Wahpeton, ND-MN
	Towner County	110	Minot, ND
	Traill County	63	Grand Forks, ND-MN
	Walsh County	63	Grand Forks, ND-MN
	Ward County	110	Minot, ND
	Wells County	55	Fargo-Wahpeton, ND-MN
	Williams County	110	Minot, ND
	Adams County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Allen County	44	Dayton-Springfield-Greenville, OH
	Ashland County	35	Cleveland-Akron-Elyria, OH
	Ashtabula County	35	Cleveland-Akron-Elyria, OH
	Athens County	40	Columbus-Marion-Chillicothe, OH
	Auglaize County	44	Dayton-Springfield-Greenville, OH
	Belmont County	129	Pittsburgh-New Castle, PA
	Brown County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Butler County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Carroll County	35	Cleveland-Akron-Elyria, OH
	Champaign County	44	Dayton-Springfield-Greenville, OH
	Clark County	44	Dayton-Springfield-Greenville, OH
	Clermont County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Clinton County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN

Ohio	Columbiana County	35	Cleveland-Akron-Elyria, OH
	Coshocton County	40	Columbus-Marion-Chillicothe, OH
	Crawford County	35	Cleveland-Akron-Elyria, OH
	Cuyahoga County	35	Cleveland-Akron-Elyria, OH
	Darke County	44	Dayton-Springfield-Greenville, OH
	Defiance County	166	Toledo-Fremont, OH
	Delaware County	40	Columbus-Marion-Chillicothe, OH
	Erie County	35	Cleveland-Akron-Elyria, OH
	Fairfield County	40	Columbus-Marion-Chillicothe, OH
	Fayette County	40	Columbus-Marion-Chillicothe, OH
	Franklin County	40	Columbus-Marion-Chillicothe, OH
	Fulton County	166	Toledo-Fremont, OH
	Gallia County	40	Columbus-Marion-Chillicothe, OH
	Geauga County	35	Cleveland-Akron-Elyria, OH
	Greene County	44	Dayton-Springfield-Greenville, OH
	Guernsey County	40	Columbus-Marion-Chillicothe, OH
	Hamilton County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Hancock County	166	Toledo-Fremont, OH
	Hardin County	40	Columbus-Marion-Chillicothe, OH
	Harrison County	35	Cleveland-Akron-Elyria, OH
	Henry County	166	Toledo-Fremont, OH
	Highland County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Hocking County	40	Columbus-Marion-Chillicothe, OH
	Holmes County	35	Cleveland-Akron-Elyria, OH
	Huron County	35	Cleveland-Akron-Elyria, OH
	Jackson County	40	Columbus-Marion-Chillicothe, OH
	Jefferson County	129	Pittsburgh-New Castle, PA
	Knox County	40	Columbus-Marion-Chillicothe, OH
	Lake County	35	Cleveland-Akron-Elyria, OH
	Lawrence County	29	Charleston, WV
	Licking County	40	Columbus-Marion-Chillicothe, OH
	Logan County	40	Columbus-Marion-Chillicothe, OH
	Lorain County	35	Cleveland-Akron-Elyria, OH
	Lucas County	166	Toledo-Fremont, OH
	Madison County	40	Columbus-Marion-Chillicothe, OH
	Mahoning County	35	Cleveland-Akron-Elyria, OH
	Marion County	40	Columbus-Marion-Chillicothe, OH
	Medina County	35	Cleveland-Akron-Elyria, OH
	Meigs County	40	Columbus-Marion-Chillicothe, OH
	Mercer County	44	Dayton-Springfield-Greenville, OH
	Miami County	44	Dayton-Springfield-Greenville, OH
	Monroe County	129	Pittsburgh-New Castle, PA
	Montgomery County	44	Dayton-Springfield-Greenville, OH
	Morgan County	40	Columbus-Marion-Chillicothe, OH
	Morrow County	40	Columbus-Marion-Chillicothe, OH
	Muskingum County	40	Columbus-Marion-Chillicothe, OH
	Noble County	40	Columbus-Marion-Chillicothe, OH
	Ottawa County	166	Toledo-Fremont, OH
	Paulding County	166	Toledo-Fremont, OH
	Perry County	40	Columbus-Marion-Chillicothe, OH
	Pickaway County	40	Columbus-Marion-Chillicothe, OH
	Pike County	40	Columbus-Marion-Chillicothe, OH
	Portage County	35	Cleveland-Akron-Elyria, OH
	Preble County	44	Dayton-Springfield-Greenville, OH
	Putnam County	44	Dayton-Springfield-Greenville, OH
	Richland County	35	Cleveland-Akron-Elyria, OH
	Ross County	40	Columbus-Marion-Chillicothe, OH
	Sandusky County	166	Toledo-Fremont, OH
	Scioto County	40	Columbus-Marion-Chillicothe, OH
	Seneca County	166	Toledo-Fremont, OH
	Shelby County	44	Dayton-Springfield-Greenville, OH
	Stark County	35	Cleveland-Akron-Elyria, OH
	Summit County	35	Cleveland-Akron-Elyria, OH
	Trumbull County	35	Cleveland-Akron-Elyria, OH
	Tuscarawas County	35	Cleveland-Akron-Elyria, OH
	Union County	40	Columbus-Marion-Chillicothe, OH
	Van Wert County	44	Dayton-Springfield-Greenville, OH
	Vinton County	40	Columbus-Marion-Chillicothe, OH
	Warren County	33	Cincinnati-Middletown-Wilmington, OH-KY-IN
	Washington County	29	Charleston, WV
	Wayne County	35	Cleveland-Akron-Elyria, OH
	Williams County	166	Toledo-Fremont, OH
	Wood County	166	Toledo-Fremont, OH
	Wyandot County	166	Toledo-Fremont, OH
	Adair County	57	Fayetteville-Springdale-Rogers, AR-MO
	Alfalfa County	119	Oklahoma City-Shawnee, OK
	Atoka County	42	Dallas-Fort Worth, TX
	Beaver County	119	Oklahoma City-Shawnee, OK
	Beckham County	119	Oklahoma City-Shawnee, OK
	Blaine County	119	Oklahoma City-Shawnee, OK
	Bryan County	42	Dallas-Fort Worth, TX
	Caddo County	119	Oklahoma City-Shawnee, OK
	Canadian County	119	Oklahoma City-Shawnee, OK
	Carter County	119	Oklahoma City-Shawnee, OK
	Cherokee County	170	Tulsa-Bartlesville, OK
	Choctaw County	42	Dallas-Fort Worth, TX
	Cimarron County	119	Oklahoma City-Shawnee, OK
	Cleveland County	119	Oklahoma City-Shawnee, OK
	Coal County	119	Oklahoma City-Shawnee, OK
	Comanche County	119	Oklahoma City-Shawnee, OK
	Cotton County	119	Oklahoma City-Shawnee, OK
	Craig County	170	Tulsa-Bartlesville, OK
	Creek County	170	Tulsa-Bartlesville, OK
	Custer County	119	Oklahoma City-Shawnee, OK
	Delaware County	57	Fayetteville-Springdale-Rogers, AR-MO
	Dewey County	119	Oklahoma City-Shawnee, OK
	Ellis County	119	Oklahoma City-Shawnee, OK

Oklahoma	Garfield County	119	Oklahoma City-Shawnee, OK
	Garvin County	119	Oklahoma City-Shawnee, OK
	Grady County	119	Oklahoma City-Shawnee, OK
	Grant County	119	Oklahoma City-Shawnee, OK
	Greer County	119	Oklahoma City-Shawnee, OK
	Harmon County	119	Oklahoma City-Shawnee, OK
	Harper County	119	Oklahoma City-Shawnee, OK
	Haskell County	170	Tulsa-Bartlesville, OK
	Hughes County	119	Oklahoma City-Shawnee, OK
	Jackson County	119	Oklahoma City-Shawnee, OK
	Jefferson County	119	Oklahoma City-Shawnee, OK
	Johnston County	119	Oklahoma City-Shawnee, OK
	Kay County	179	Wichita-Winfield, KS
	Kingfisher County	119	Oklahoma City-Shawnee, OK
	Kiowa County	119	Oklahoma City-Shawnee, OK
	Latimer County	59	Fort Smith, AR-OK
	Le Flore County	59	Fort Smith, AR-OK
	Lincoln County	119	Oklahoma City-Shawnee, OK
	Logan County	119	Oklahoma City-Shawnee, OK
	Love County	119	Oklahoma City-Shawnee, OK
	Major County	119	Oklahoma City-Shawnee, OK
	Marshall County	119	Oklahoma City-Shawnee, OK
	Mayes County	170	Tulsa-Bartlesville, OK
	McClain County	119	Oklahoma City-Shawnee, OK
	McCurtain County	165	Texarkana, TX-Texarkana, AR
	McIntosh County	170	Tulsa-Bartlesville, OK
	Murray County	119	Oklahoma City-Shawnee, OK
	Muskogee County	170	Tulsa-Bartlesville, OK
	Noble County	170	Tulsa-Bartlesville, OK
	Nowata County	170	Tulsa-Bartlesville, OK
	Okfuskee County	170	Tulsa-Bartlesville, OK
	Oklahoma County	119	Oklahoma City-Shawnee, OK
	Okmulgee County	170	Tulsa-Bartlesville, OK
	Osage County	170	Tulsa-Bartlesville, OK
	Ottawa County	83	Joplin, MO
	Pawnee County	170	Tulsa-Bartlesville, OK
	Payne County	170	Tulsa-Bartlesville, OK
	Pittsburg County	170	Tulsa-Bartlesville, OK
	Pontotoc County	119	Oklahoma City-Shawnee, OK
	Pottawatomie County	119	Oklahoma City-Shawnee, OK
	Pushmataha County	42	Dallas-Fort Worth, TX
	Roger Mills County	119	Oklahoma City-Shawnee, OK
	Rogers County	170	Tulsa-Bartlesville, OK
	Seminole County	119	Oklahoma City-Shawnee, OK
	Sequoyah County	59	Fort Smith, AR-OK
	Stephens County	119	Oklahoma City-Shawnee, OK
	Texas County	119	Oklahoma City-Shawnee, OK
	Tillman County	119	Oklahoma City-Shawnee, OK
	Tulsa County	170	Tulsa-Bartlesville, OK
	Wagoner County	170	Tulsa-Bartlesville, OK
	Washington County	170	Tulsa-Bartlesville, OK
	Washita County	119	Oklahoma City-Shawnee, OK
	Woods County	119	Oklahoma City-Shawnee, OK
	Woodward County	119	Oklahoma City-Shawnee, OK
Oregon	Baker County	124	Pendleton-Hermiston, OR
	Benton County	131	Portland-Vancouver-Beaverton, OR-WA
	Clackamas County	131	Portland-Vancouver-Beaverton, OR-WA
	Clatsop County	131	Portland-Vancouver-Beaverton, OR-WA
	Columbia County	131	Portland-Vancouver-Beaverton, OR-WA
	Coos County	53	Eugene-Springfield, OR
	Crook County	17	Bend-Prineville, OR
	Curry County	146	San Jose-San Francisco-Oakland, CA
	Deschutes County	17	Bend-Prineville, OR
	Douglas County	53	Eugene-Springfield, OR
	Gilliam County	124	Pendleton-Hermiston, OR
	Grant County	124	Pendleton-Hermiston, OR
	Harney County	17	Bend-Prineville, OR
	Hood River County	131	Portland-Vancouver-Beaverton, OR-WA
	Jackson County	53	Eugene-Springfield, OR
	Jefferson County	17	Bend-Prineville, OR
	Josephine County	53	Eugene-Springfield, OR
	Klamath County	135	Redding, CA
	Lake County	17	Bend-Prineville, OR
Oregon	Lane County	53	Eugene-Springfield, OR
	Lincoln County	131	Portland-Vancouver-Beaverton, OR-WA
	Linn County	131	Portland-Vancouver-Beaverton, OR-WA
	Malheur County	21	Boise City-Nampa, ID
	Marion County	131	Portland-Vancouver-Beaverton, OR-WA
	Morrow County	124	Pendleton-Hermiston, OR
	Multnomah County	131	Portland-Vancouver-Beaverton, OR-WA
	Polk County	131	Portland-Vancouver-Beaverton, OR-WA
	Sherman County	131	Portland-Vancouver-Beaverton, OR-WA
	Tillamook County	131	Portland-Vancouver-Beaverton, OR-WA
	Umatilla County	124	Pendleton-Hermiston, OR
	Union County	124	Pendleton-Hermiston, OR
	Wallowa County	124	Pendleton-Hermiston, OR
	Wasco County	131	Portland-Vancouver-Beaverton, OR-WA
	Washington County	131	Portland-Vancouver-Beaverton, OR-WA
	Wheeler County	124	Pendleton-Hermiston, OR
	Yamhill County	131	Portland-Vancouver-Beaverton, OR-WA
	Adams County	70	Harrisburg-Carlisle-Lebanon, PA
	Allegheny County	129	Pittsburgh-New Castle, PA
	Armstrong County	129	Pittsburgh-New Castle, PA
	Beaver County	129	Pittsburgh-New Castle, PA
	Bedford County	161	State College, PA
	Berks County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Blair County	161	State College, PA

Pennsylvania	Bradford County	139	Rochester-Batavia-Seneca Falls, NY
	Bucks County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Butler County	129	Pittsburgh-New Castle, PA
	Cambria County	161	State College, PA
	Cameron County	161	State College, PA
	Carbon County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Centre County	161	State College, PA
	Chester County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Clarion County	52	Erie, PA
	Clearfield County	161	State College, PA
	Clinton County	70	Harrisburg-Carlisle-Lebanon, PA
	Columbia County	70	Harrisburg-Carlisle-Lebanon, PA
	Crawford County	52	Erie, PA
	Cumberland County	70	Harrisburg-Carlisle-Lebanon, PA
	Dauphin County	70	Harrisburg-Carlisle-Lebanon, PA
	Delaware County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Elk County	161	State College, PA
	Erie County	52	Erie, PA
	Fayette County	129	Pittsburgh-New Castle, PA
	Forest County	52	Erie, PA
	Franklin County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Fulton County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Greene County	129	Pittsburgh-New Castle, PA
	Huntingdon County	161	State College, PA
	Indiana County	129	Pittsburgh-New Castle, PA
	Jefferson County	161	State College, PA
	Juniata County	70	Harrisburg-Carlisle-Lebanon, PA
	Lackawanna County	151	Scranton--Wilkes-Barre, PA
	Lancaster County	70	Harrisburg-Carlisle-Lebanon, PA
	Lawrence County	129	Pittsburgh-New Castle, PA
	Lebanon County	70	Harrisburg-Carlisle-Lebanon, PA
	Lehigh County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Luzerne County	151	Scranton--Wilkes-Barre, PA
	Lycoming County	70	Harrisburg-Carlisle-Lebanon, PA
	Mc Kean County	23	Buffalo-Niagara-Cattaraugus, NY
	Mercer County	35	Cleveland-Akron-Elyria, OH
	Mifflin County	161	State College, PA
	Monroe County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Montgomery County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Montour County	70	Harrisburg-Carlisle-Lebanon, PA
	Northampton County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Northumberland County	70	Harrisburg-Carlisle-Lebanon, PA
	Perry County	70	Harrisburg-Carlisle-Lebanon, PA
	Philadelphia County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Pike County	118	New York-Newark-Bridgeport, NY-NJ-CT-PA
	Potter County	23	Buffalo-Niagara-Cattaraugus, NY
	Schuylkill County	127	Philadelphia-Camden-Vineland, PA-NJ-DE-MD
	Snyder County	70	Harrisburg-Carlisle-Lebanon, PA
	Somerset County	161	State College, PA
	Sullivan County	139	Rochester-Batavia-Seneca Falls, NY
	Susquehanna County	151	Scranton--Wilkes-Barre, PA
	Tioga County	139	Rochester-Batavia-Seneca Falls, NY
	Union County	70	Harrisburg-Carlisle-Lebanon, PA
	Venango County	52	Erie, PA
	Warren County	52	Erie, PA
	Washington County	129	Pittsburgh-New Castle, PA
	Wayne County	151	Scranton--Wilkes-Barre, PA
	Westmoreland County	129	Pittsburgh-New Castle, PA
	Wyoming County	151	Scranton--Wilkes-Barre, PA
	York County	70	Harrisburg-Carlisle-Lebanon, PA
Rhode Island	All Counties	22	Boston-Worcester-Manchester, MA-NH
South Carolina	Abbeville County	68	Greenville-Spartanburg-Anderson, SC
	Aiken County	12	Augusta-Richmond County, GA-SC
	Allendale County	12	Augusta-Richmond County, GA-SC
	Anderson County	68	Greenville-Spartanburg-Anderson, SC
	Bamberg County	38	Columbia-Newberry, SC
	Barnwell County	12	Augusta-Richmond County, GA-SC
	Beaufort County	149	Savannah-Hinesville-Fort Stewart, GA
	Berkeley County	30	Charleston-North Charleston, SC
	Calhoun County	38	Columbia-Newberry, SC
	Charleston County	30	Charleston-North Charleston, SC
South Carolina	Cherokee County	68	Greenville-Spartanburg-Anderson, SC
	Chester County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Chesterfield County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Clarendon County	38	Columbia-Newberry, SC
	Colleton County	30	Charleston-North Charleston, SC
	Darlington County	115	Myrtle Beach-Conway-Georgetown, SC
	Dillon County	115	Myrtle Beach-Conway-Georgetown, SC
	Dorchester County	30	Charleston-North Charleston, SC
	Edgefield County	12	Augusta-Richmond County, GA-SC
	Fairfield County	38	Columbia-Newberry, SC
	Florence County	115	Myrtle Beach-Conway-Georgetown, SC
	Georgetown County	115	Myrtle Beach-Conway-Georgetown, SC
	Greenville County	68	Greenville-Spartanburg-Anderson, SC
	Greenwood County	68	Greenville-Spartanburg-Anderson, SC
	Hampton County	149	Savannah-Hinesville-Fort Stewart, GA
	Horry County	115	Myrtle Beach-Conway-Georgetown, SC
	Jasper County	149	Savannah-Hinesville-Fort Stewart, GA
	Kershaw County	38	Columbia-Newberry, SC
	Lancaster County	31	Charlotte-Gastonia-Salisbury, NC-SC
	Laurens County	68	Greenville-Spartanburg-Anderson, SC
	Lee County	38	Columbia-Newberry, SC
	Lexington County	38	Columbia-Newberry, SC
	Marion County	115	Myrtle Beach-Conway-Georgetown, SC
	Marlboro County	133	Raleigh-Durham-Cary, NC
	McCormick County	68	Greenville-Spartanburg-Anderson, SC
	Newberry County	38	Columbia-Newberry, SC

	Oconee County	68	Greenville-Spartanburg-Anderson, SC
	Orangeburg County	38	Columbia-Newberry, SC
	Pickens County	68	Greenville-Spartanburg-Anderson, SC
	Richland County	38	Columbia-Newberry, SC
	Saluda County	38	Columbia-Newberry, SC
	Spartanburg County	68	Greenville-Spartanburg-Anderson, SC
	Sumter County	38	Columbia-Newberry, SC
	Union County	68	Greenville-Spartanburg-Anderson, SC
	Williamsburg County	115	Myrtle Beach-Conway-Georgetown, SC
	York County	31	Charlotte-Gastonia-Salisbury, NC-SC
South Dakota	Aurora County	155	Sioux Falls, SD
	Beadle County	155	Sioux Falls, SD
	Bennett County	134	Rapid City, SD
	Bon Homme County	154	Sioux City-Vermillion, IA-NE-SD
	Brookings County	155	Sioux Falls, SD
	Brown County	1	Aberdeen, SD
	Brule County	155	Sioux Falls, SD
	Buffalo County	155	Sioux Falls, SD
	Butte County	134	Rapid City, SD
	Campbell County	1	Aberdeen, SD
	Charles Mix County	155	Sioux Falls, SD
	Clark County	155	Sioux Falls, SD
	Clay County	154	Sioux City-Vermillion, IA-NE-SD
	Codington County	155	Sioux Falls, SD
	Corson County	1	Aberdeen, SD
	Custer County	134	Rapid City, SD
	Davison County	155	Sioux Falls, SD
	Day County	155	Sioux Falls, SD
	Deuel County	155	Sioux Falls, SD
	Dewey County	1	Aberdeen, SD
	Douglas County	155	Sioux Falls, SD
	Edmunds County	1	Aberdeen, SD
	Fall River County	134	Rapid City, SD
	Faulk County	1	Aberdeen, SD
	Grant County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Gregory County	134	Rapid City, SD
	Haakon County	134	Rapid City, SD
	Hamlin County	155	Sioux Falls, SD
	Hand County	155	Sioux Falls, SD
	Hanson County	155	Sioux Falls, SD
	Harding County	20	Bismarck, ND
	Hughes County	155	Sioux Falls, SD
	Hutchinson County	155	Sioux Falls, SD
	Hyde County	155	Sioux Falls, SD
	Jackson County	134	Rapid City, SD
	Jerauld County	155	Sioux Falls, SD
	Jones County	155	Sioux Falls, SD
	Kingsbury County	155	Sioux Falls, SD
	Lake County	155	Sioux Falls, SD
	Lawrence County	134	Rapid City, SD
	Lincoln County	155	Sioux Falls, SD
	Lyman County	155	Sioux Falls, SD
	Marshall County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	McCook County	155	Sioux Falls, SD
	McPherson County	1	Aberdeen, SD
	Meade County	134	Rapid City, SD
	Mellette County	134	Rapid City, SD
	Miner County	155	Sioux Falls, SD
	Minnehaha County	155	Sioux Falls, SD
	Moody County	155	Sioux Falls, SD
	Pennington County	134	Rapid City, SD
	Perkins County	20	Bismarck, ND
	Potter County	1	Aberdeen, SD
	Roberts County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Sanborn County	155	Sioux Falls, SD
	Shannon County	134	Rapid City, SD
	Spink County	1	Aberdeen, SD
	Stanley County	155	Sioux Falls, SD
	Sully County	155	Sioux Falls, SD
	Todd County	134	Rapid City, SD
	Tripp County	134	Rapid City, SD
South Dakota	Turner County	155	Sioux Falls, SD
	Union County	154	Sioux City-Vermillion, IA-NE-SD
	Walworth County	1	Aberdeen, SD
	Yankton County	154	Sioux City-Vermillion, IA-NE-SD
	Ziebach County	1	Aberdeen, SD
	Anderson County	88	Knoxville-Sevierville-La Follette, TN
	Bedford County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Benton County	105	Memphis, TN-MS-AR
	Bledsoe County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Blount County	88	Knoxville-Sevierville-La Follette, TN
	Bradley County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Campbell County	88	Knoxville-Sevierville-La Follette, TN
	Cannon County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Carroll County	105	Memphis, TN-MS-AR
	Carter County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Cheatham County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Chester County	105	Memphis, TN-MS-AR
	Claiborne County	88	Knoxville-Sevierville-La Follette, TN
	Clay County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Cocke County	88	Knoxville-Sevierville-La Follette, TN
	Coffee County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Crockett County	105	Memphis, TN-MS-AR
	Cumberland County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Davidson County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Decatur County	105	Memphis, TN-MS-AR
	DeKalb County	116	Nashville-Davidson--Murfreesboro--Columbia, TN

Tennessee	Dickson County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Dyer County	105	Memphis, TN-MS-AR
	Fayette County	105	Memphis, TN-MS-AR
	Fentress County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Franklin County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Gibson County	105	Memphis, TN-MS-AR
	Giles County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Grainger County	88	Knoxville-Sevierville-La Follette, TN
	Greene County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Grundy County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Hamblen County	88	Knoxville-Sevierville-La Follette, TN
	Hamilton County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Hancock County	88	Knoxville-Sevierville-La Follette, TN
	Hardeman County	105	Memphis, TN-MS-AR
	Hardin County	171	Tupelo, MS
	Hawkins County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Haywood County	105	Memphis, TN-MS-AR
	Henderson County	105	Memphis, TN-MS-AR
	Henry County	105	Memphis, TN-MS-AR
	Hickman County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Houston County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Humphreys County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Jackson County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Jefferson County	88	Knoxville-Sevierville-La Follette, TN
	Johnson County	10	Asheville-Brevard, NC
	Knox County	88	Knoxville-Sevierville-La Follette, TN
	Lake County	105	Memphis, TN-MS-AR
	Lauderdale County	105	Memphis, TN-MS-AR
	Lawrence County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Lewis County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Lincoln County	76	Huntsville-Decatur, AL
	Loudon County	88	Knoxville-Sevierville-La Follette, TN
	Macon County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Madison County	105	Memphis, TN-MS-AR
	Marion County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Marshall County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Maury County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	McMinn County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	McNairy County	171	Tupelo, MS
	Meigs County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Monroe County	88	Knoxville-Sevierville-La Follette, TN
	Montgomery County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Moore County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Morgan County	88	Knoxville-Sevierville-La Follette, TN
	Obion County	105	Memphis, TN-MS-AR
	Overton County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Perry County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Pickett County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Polk County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Putnam County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Rhea County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Roane County	88	Knoxville-Sevierville-La Follette, TN
	Robertson County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Rutherford County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Scott County	88	Knoxville-Sevierville-La Follette, TN
	Sequatchie County	11	Atlanta-Sandy Springs-Gainesville, GA-AL
	Sevier County	88	Knoxville-Sevierville-La Follette, TN
	Shelby County	105	Memphis, TN-MS-AR
	Smith County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Stewart County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Sullivan County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Sumner County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Tipton County	105	Memphis, TN-MS-AR
	Trousdale County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Unicoi County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Union County	88	Knoxville-Sevierville-La Follette, TN
	Van Buren County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Warren County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Washington County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Wayne County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
Tennessee	Weakley County	105	Memphis, TN-MS-AR
	White County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Williamson County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Wilson County	116	Nashville-Davidson--Murfreesboro--Columbia, TN
	Anderson County	42	Dallas-Fort Worth, TX
	Andrews County	107	Midland-Odessa, TX
	Angelina County	75	Houston-Baytown-Huntsville, TX
	Aransas County	41	Corpus Christi-Kingsville, TX
	Archer County	178	Wichita Falls, TX
	Armstrong County	7	Amarillo, TX
	Atascosa County	144	San Antonio, TX
	Austin County	75	Houston-Baytown-Huntsville, TX
	Bailey County	7	Amarillo, TX
	Bandera County	144	San Antonio, TX
	Bastrop County	13	Austin-Round Rock, TX
	Baylor County	178	Wichita Falls, TX
	Bee County	41	Corpus Christi-Kingsville, TX
	Bell County	87	Killeen-Temple-Fort Hood, TX
	Bexar County	144	San Antonio, TX
	Blanco County	13	Austin-Round Rock, TX
	Borden County	99	Lubbock-Levelland, TX
	Bosque County	42	Dallas-Fort Worth, TX
	Bowie County	165	Texarkana, TX-Texarkana, AR
	Brazoria County	75	Houston-Baytown-Huntsville, TX
	Brazos County	75	Houston-Baytown-Huntsville, TX
	Brewster County	107	Midland-Odessa, TX
	Briscoe County	99	Lubbock-Levelland, TX

Texas	Brooks County	41	Corpus Christi-Kingsville, TX
	Brown County	42	Dallas-Fort Worth, TX
	Burleson County	75	Houston-Baytown-Huntsville, TX
	Burnet County	13	Austin-Round Rock, TX
	Caldwell County	13	Austin-Round Rock, TX
	Calhoun County	75	Houston-Baytown-Huntsville, TX
	Callahan County	2	Abilene, TX
	Cameron County	104	McAllen-Edinburg-Pharr, TX
	Camp County	42	Dallas-Fort Worth, TX
	Carson County	7	Amarillo, TX
	Cass County	165	Texarkana, TX-Texarkana, AR
	Castro County	7	Amarillo, TX
	Chambers County	75	Houston-Baytown-Huntsville, TX
	Cherokee County	42	Dallas-Fort Worth, TX
	Childress County	178	Wichita Falls, TX
	Clay County	178	Wichita Falls, TX
	Cochran County	99	Lubbock-Levelland, TX
	Coke County	143	San Angelo, TX
	Coleman County	42	Dallas-Fort Worth, TX
	Collin County	42	Dallas-Fort Worth, TX
	Collingsworth County	178	Wichita Falls, TX
	Colorado County	75	Houston-Baytown-Huntsville, TX
	Comal County	144	San Antonio, TX
	Comanche County	42	Dallas-Fort Worth, TX
	Concho County	143	San Angelo, TX
	Cooke County	42	Dallas-Fort Worth, TX
	Coryell County	87	Killeen-Temple-Fort Hood, TX
	Cottle County	178	Wichita Falls, TX
	Crane County	107	Midland-Odessa, TX
	Crockett County	143	San Angelo, TX
	Crosby County	99	Lubbock-Levelland, TX
	Culberson County	51	El Paso, TX
	Dallam County	7	Amarillo, TX
	Dallas County	42	Dallas-Fort Worth, TX
	Dawson County	99	Lubbock-Levelland, TX
	Deaf Smith County	7	Amarillo, TX
	Delta County	42	Dallas-Fort Worth, TX
	Denton County	42	Dallas-Fort Worth, TX
	DeWitt County	75	Houston-Baytown-Huntsville, TX
	Dickens County	99	Lubbock-Levelland, TX
	Dimmit County	144	San Antonio, TX
	Donley County	7	Amarillo, TX
	Duval County	41	Corpus Christi-Kingsville, TX
	Eastland County	42	Dallas-Fort Worth, TX
	Ector County	107	Midland-Odessa, TX
	Edwards County	144	San Antonio, TX
	El Paso County	51	El Paso, TX
	Ellis County	42	Dallas-Fort Worth, TX
	Erath County	42	Dallas-Fort Worth, TX
	Falls County	87	Killeen-Temple-Fort Hood, TX
	Fannin County	42	Dallas-Fort Worth, TX
	Fayette County	75	Houston-Baytown-Huntsville, TX
	Fisher County	2	Abilene, TX
	Floyd County	99	Lubbock-Levelland, TX
	Foard County	178	Wichita Falls, TX
	Fort Bend County	75	Houston-Baytown-Huntsville, TX
	Franklin County	42	Dallas-Fort Worth, TX
	Freestone County	87	Killeen-Temple-Fort Hood, TX
	Frio County	144	San Antonio, TX
	Gaines County	99	Lubbock-Levelland, TX
	Galveston County	75	Houston-Baytown-Huntsville, TX
	Garza County	99	Lubbock-Levelland, TX
	Gillespie County	144	San Antonio, TX
	Glasscock County	107	Midland-Odessa, TX
	Goliad County	75	Houston-Baytown-Huntsville, TX
	Gonzales County	144	San Antonio, TX
	Gray County	7	Amarillo, TX
	Grayson County	42	Dallas-Fort Worth, TX
	Gregg County	42	Dallas-Fort Worth, TX
	Grimes County	75	Houston-Baytown-Huntsville, TX
	Guadalupe County	144	San Antonio, TX
	Hale County	99	Lubbock-Levelland, TX
	Hall County	178	Wichita Falls, TX
	Hamilton County	42	Dallas-Fort Worth, TX
	Hansford County	7	Amarillo, TX
	Hardeman County	178	Wichita Falls, TX
	Hardin County	16	Beaumont-Port Arthur, TX
	Harris County	75	Houston-Baytown-Huntsville, TX
	Harrison County	42	Dallas-Fort Worth, TX
	Hartley County	7	Amarillo, TX
	Haskell County	2	Abilene, TX
	Hays County	13	Austin-Round Rock, TX
	Hemphill County	7	Amarillo, TX
	Henderson County	42	Dallas-Fort Worth, TX
	Hidalgo County	104	McAllen-Edinburg-Pharr, TX
	Hill County	42	Dallas-Fort Worth, TX
	Hockley County	99	Lubbock-Levelland, TX
	Hood County	42	Dallas-Fort Worth, TX
	Hopkins County	42	Dallas-Fort Worth, TX
	Houston County	75	Houston-Baytown-Huntsville, TX
	Howard County	107	Midland-Odessa, TX
	Hudspeth County	51	El Paso, TX
	Hunt County	42	Dallas-Fort Worth, TX
	Hutchinson County	7	Amarillo, TX
	Irion County	143	San Angelo, TX
	Jack County	42	Dallas-Fort Worth, TX
	Jackson County	75	Houston-Baytown-Huntsville, TX

Texas	Jasper County	16	Beaumont-Port Arthur, TX
	Jeff Davis County	107	Midland-Odessa, TX
	Jefferson County	16	Beaumont-Port Arthur, TX
	Jim Hogg County	41	Corpus Christi-Kingsville, TX
	Jim Wells County	41	Corpus Christi-Kingsville, TX
	Johnson County	42	Dallas-Fort Worth, TX
	Jones County	2	Abilene, TX
	Karnes County	144	San Antonio, TX
	Kaufman County	42	Dallas-Fort Worth, TX
	Kendall County	144	San Antonio, TX
	Kenedy County	41	Corpus Christi-Kingsville, TX
	Kent County	2	Abilene, TX
	Kerr County	144	San Antonio, TX
	Kimble County	144	San Antonio, TX
	King County	178	Wichita Falls, TX
	Kinney County	144	San Antonio, TX
	Kleberg County	41	Corpus Christi-Kingsville, TX
	Knox County	2	Abilene, TX
	La Salle County	144	San Antonio, TX
	Lamar County	42	Dallas-Fort Worth, TX
	Lamb County	99	Lubbock-Levelland, TX
	Lampasas County	87	Killeen-Temple-Fort Hood, TX
	Lavaca County	75	Houston-Baytown-Huntsville, TX
	Lee County	13	Austin-Round Rock, TX
	Leon County	75	Houston-Baytown-Huntsville, TX
	Liberty County	75	Houston-Baytown-Huntsville, TX
	Limestone County	87	Killeen-Temple-Fort Hood, TX
	Lipscomb County	7	Amarillo, TX
	Live Oak County	41	Corpus Christi-Kingsville, TX
	Llano County	13	Austin-Round Rock, TX
	Loving County	107	Midland-Odessa, TX
	Lubbock County	99	Lubbock-Levelland, TX
	Lynn County	99	Lubbock-Levelland, TX
	Madison County	75	Houston-Baytown-Huntsville, TX
	Marion County	42	Dallas-Fort Worth, TX
	Martin County	107	Midland-Odessa, TX
	Mason County	13	Austin-Round Rock, TX
	Matagorda County	75	Houston-Baytown-Huntsville, TX
	Maverick County	144	San Antonio, TX
	McCulloch County	42	Dallas-Fort Worth, TX
	McLennan County	87	Killeen-Temple-Fort Hood, TX
	McMullen County	41	Corpus Christi-Kingsville, TX
	Medina County	144	San Antonio, TX
	Menard County	143	San Angelo, TX
	Midland County	107	Midland-Odessa, TX
	Milam County	13	Austin-Round Rock, TX
	Mills County	42	Dallas-Fort Worth, TX
	Mitchell County	2	Abilene, TX
	Montague County	42	Dallas-Fort Worth, TX
	Montgomery County	75	Houston-Baytown-Huntsville, TX
	Moore County	7	Amarillo, TX
	Morris County	42	Dallas-Fort Worth, TX
	Motley County	99	Lubbock-Levelland, TX
	Nacogdoches County	75	Houston-Baytown-Huntsville, TX
	Navarro County	42	Dallas-Fort Worth, TX
	Newton County	16	Beaumont-Port Arthur, TX
	Nolan County	2	Abilene, TX
	Nueces County	41	Corpus Christi-Kingsville, TX
	Ochiltree County	7	Amarillo, TX
	Oldham County	7	Amarillo, TX
	Orange County	16	Beaumont-Port Arthur, TX
	Palo Pinto County	42	Dallas-Fort Worth, TX
	Panola County	42	Dallas-Fort Worth, TX
	Parker County	42	Dallas-Fort Worth, TX
	Parmer County	7	Amarillo, TX
	Pecos County	107	Midland-Odessa, TX
	Polk County	75	Houston-Baytown-Huntsville, TX
	Potter County	7	Amarillo, TX
	Presidio County	107	Midland-Odessa, TX
	Rains County	42	Dallas-Fort Worth, TX
	Randall County	7	Amarillo, TX
	Reagan County	107	Midland-Odessa, TX
	Real County	144	San Antonio, TX
	Red River County	42	Dallas-Fort Worth, TX
	Reeves County	107	Midland-Odessa, TX
	Refugio County	41	Corpus Christi-Kingsville, TX
	Roberts County	7	Amarillo, TX
	Robertson County	75	Houston-Baytown-Huntsville, TX
	Rockwall County	42	Dallas-Fort Worth, TX
	Runnels County	143	San Angelo, TX
	Rusk County	42	Dallas-Fort Worth, TX
	Sabine County	75	Houston-Baytown-Huntsville, TX
	San Augustine County	75	Houston-Baytown-Huntsville, TX
	San Jacinto County	75	Houston-Baytown-Huntsville, TX
	San Patricio County	41	Corpus Christi-Kingsville, TX
	San Saba County	42	Dallas-Fort Worth, TX
	Schleicher County	143	San Angelo, TX
	Scurry County	2	Abilene, TX
	Shackelford County	2	Abilene, TX
	Shelby County	75	Houston-Baytown-Huntsville, TX
	Sherman County	119	Oklahoma City-Shawnee, OK
	Smith County	42	Dallas-Fort Worth, TX
	Somervell County	42	Dallas-Fort Worth, TX
	Starr County	104	McAllen-Edinburg-Pharr, TX
	Stephens County	42	Dallas-Fort Worth, TX
	Sterling County	143	San Angelo, TX
	Stonewall County	2	Abilene, TX

Texas	Sutton County	143	San Angelo, TX
	Swisher County	99	Lubbock-Levelland, TX
	Tarrant County	42	Dallas-Fort Worth, TX
	Taylor County	2	Abilene, TX
	Terrell County	107	Midland-Odessa, TX
	Terry County	99	Lubbock-Levelland, TX
	Throckmorton County	42	Dallas-Fort Worth, TX
	Titus County	42	Dallas-Fort Worth, TX
	Tom Green County	143	San Angelo, TX
	Travis County	13	Austin-Round Rock, TX
	Trinity County	75	Houston-Baytown-Huntsville, TX
	Tyler County	16	Beaumont-Port Arthur, TX
	Upshur County	42	Dallas-Fort Worth, TX
	Upton County	107	Midland-Odessa, TX
	Uvalde County	144	San Antonio, TX
	Val Verde County	144	San Antonio, TX
	Van Zandt County	42	Dallas-Fort Worth, TX
	Victoria County	75	Houston-Baytown-Huntsville, TX
	Walker County	75	Houston-Baytown-Huntsville, TX
	Waller County	75	Houston-Baytown-Huntsville, TX
	Ward County	107	Midland-Odessa, TX
	Washington County	75	Houston-Baytown-Huntsville, TX
	Webb County	41	Corpus Christi-Kingsville, TX
	Wharton County	75	Houston-Baytown-Huntsville, TX
	Wheeler County	7	Amarillo, TX
	Wichita County	178	Wichita Falls, TX
	Wilbarger County	178	Wichita Falls, TX
	Willacy County	104	McAllen-Edinburg-Pharr, TX
	Williamson County	13	Austin-Round Rock, TX
	Wilson County	144	San Antonio, TX
	Winkler County	107	Midland-Odessa, TX
	Wise County	42	Dallas-Fort Worth, TX
	Wood County	42	Dallas-Fort Worth, TX
	Yoakum County	99	Lubbock-Levelland, TX
	Young County	42	Dallas-Fort Worth, TX
	Zapata County	41	Corpus Christi-Kingsville, TX
	Zavala County	144	San Antonio, TX
Utah	Beaver County	92	Las Vegas-Paradise-Pahrump, NV
	Box Elder County	142	Salt Lake City-Ogden-Clearfield, UT
	Cache County	142	Salt Lake City-Ogden-Clearfield, UT
	Carbon County	142	Salt Lake City-Ogden-Clearfield, UT
	Daggett County	142	Salt Lake City-Ogden-Clearfield, UT
	Davis County	142	Salt Lake City-Ogden-Clearfield, UT
	Duchesne County	142	Salt Lake City-Ogden-Clearfield, UT
	Emery County	142	Salt Lake City-Ogden-Clearfield, UT
	Garfield County	142	Salt Lake City-Ogden-Clearfield, UT
	Grand County	142	Salt Lake City-Ogden-Clearfield, UT
	Iron County	92	Las Vegas-Paradise-Pahrump, NV
	Juab County	142	Salt Lake City-Ogden-Clearfield, UT
	Kane County	58	Flagstaff, AZ
	Millard County	142	Salt Lake City-Ogden-Clearfield, UT
	Morgan County	142	Salt Lake City-Ogden-Clearfield, UT
	Piute County	142	Salt Lake City-Ogden-Clearfield, UT
	Rich County	26	Casper, WY
	Salt Lake County	142	Salt Lake City-Ogden-Clearfield, UT
	San Juan County	142	Salt Lake City-Ogden-Clearfield, UT
	Sanpete County	142	Salt Lake City-Ogden-Clearfield, UT
	Sevier County	142	Salt Lake City-Ogden-Clearfield, UT
	Summit County	142	Salt Lake City-Ogden-Clearfield, UT
	Tooele County	142	Salt Lake City-Ogden-Clearfield, UT
	Uintah County	142	Salt Lake City-Ogden-Clearfield, UT
	Utah County	142	Salt Lake City-Ogden-Clearfield, UT
	Wasatch County	142	Salt Lake City-Ogden-Clearfield, UT
	Washington County	92	Las Vegas-Paradise-Pahrump, NV
	Wayne County	142	Salt Lake City-Ogden-Clearfield, UT
	Weber County	142	Salt Lake City-Ogden-Clearfield, UT
Vermont	Addison County	24	Burlington-South Burlington, VT
Vermont	Bennington County	4	Albany-Schenectady-Amsterdam, NY
	Caledonia County	24	Burlington-South Burlington, VT
	Chittenden County	24	Burlington-South Burlington, VT
	Essex County	22	Boston-Worcester-Manchester, MA-NH
	Franklin County	24	Burlington-South Burlington, VT
	Grand Isle County	24	Burlington-South Burlington, VT
	Lamoille County	24	Burlington-South Burlington, VT
	Orange County	22	Boston-Worcester-Manchester, MA-NH
	Orleans County	24	Burlington-South Burlington, VT
	Rutland County	22	Boston-Worcester-Manchester, MA-NH
	Washington County	24	Burlington-South Burlington, VT
	Windham County	22	Boston-Worcester-Manchester, MA-NH
	Windsor County	22	Boston-Worcester-Manchester, MA-NH
	Accomack County	49	Dover, DE
	Albemarle County	137	Richmond, VA
	Alexandria city	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Alleghany County	138	Roanoke, VA
	Amelia County	137	Richmond, VA
	Amherst County	138	Roanoke, VA
	Appomattox County	138	Roanoke, VA
	Arlington County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Augusta County	71	Harrisonburg, VA
	Bath County	71	Harrisonburg, VA
	Bedford city	138	Roanoke, VA
	Bedford County	138	Roanoke, VA
	Bland County	138	Roanoke, VA
	Botetourt County	138	Roanoke, VA
	Bristol city	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Brunswick County	137	Richmond, VA
	Buchanan County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA

Virginia	Buckingham County	137	Richmond, VA
	Buena Vista city	71	Harrisonburg, VA
	Campbell County	138	Roanoke, VA
	Caroline County	137	Richmond, VA
	Carroll County	66	Greensboro--Winston-Salem--High Point, NC
	Charles City County	137	Richmond, VA
	Charlotte County	137	Richmond, VA
	Charlottesville city	137	Richmond, VA
	Chesapeake city	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Chesterfield County	137	Richmond, VA
	Clarke County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Clifton Forge city	138	Roanoke, VA
	Colonial Heights city	137	Richmond, VA
	Covington city	138	Roanoke, VA
	Craig County	138	Roanoke, VA
	Culpeper County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Cumberland County	137	Richmond, VA
	Danville city	66	Greensboro--Winston-Salem--High Point, NC
	Dickenson County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Dinwiddie County	137	Richmond, VA
	Emporia city	137	Richmond, VA
	Essex County	137	Richmond, VA
	Fairfax city	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Fairfax County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Falls Church city	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Fauquier County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Floyd County	138	Roanoke, VA
	Fluvanna County	137	Richmond, VA
	Franklin city	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Franklin County	138	Roanoke, VA
	Frederick County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Fredericksburg city	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Galax city	66	Greensboro--Winston-Salem--High Point, NC
	Giles County	138	Roanoke, VA
	Gloucester County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Goochland County	137	Richmond, VA
	Grayson County	66	Greensboro--Winston-Salem--High Point, NC
	Greene County	137	Richmond, VA
	Greensville County	137	Richmond, VA
	Halifax County	133	Raleigh-Durham-Cary, NC
	Hampton city	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Hanover County	137	Richmond, VA
	Harrisonburg city	71	Harrisonburg, VA
	Henrico County	137	Richmond, VA
	Henry County	66	Greensboro--Winston-Salem--High Point, NC
	Highland County	71	Harrisonburg, VA
	Hopewell city	137	Richmond, VA
	Isle of Wight County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	James City County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	King and Queen County	137	Richmond, VA
	King George County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	King William County	137	Richmond, VA
	Lancaster County	137	Richmond, VA
	Lee County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Lexington city	71	Harrisonburg, VA
	Loudoun County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Louisa County	137	Richmond, VA
	Lunenburg County	137	Richmond, VA
	Lynchburg city	138	Roanoke, VA
	Madison County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Manassas city	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Manassas Park city	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Martinsville city	66	Greensboro--Winston-Salem--High Point, NC
	Mathews County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Mecklenburg County	137	Richmond, VA
	Middlesex County	137	Richmond, VA
Virginia	Montgomery County	138	Roanoke, VA
	Nelson County	137	Richmond, VA
	New Kent County	137	Richmond, VA
	Newport News city	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Norfolk city	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Northampton County	49	Dover, DE
	Northumberland County	137	Richmond, VA
	Norton city	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Nottoway County	137	Richmond, VA
	Orange County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Page County	71	Harrisonburg, VA
	Patrick County	66	Greensboro--Winston-Salem--High Point, NC
	Petersburg city	137	Richmond, VA
	Pittsylvania County	66	Greensboro--Winston-Salem--High Point, NC
	Poquoson city	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Portsmouth city	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Powhatan County	137	Richmond, VA
	Prince Edward County	137	Richmond, VA
	Prince George County	137	Richmond, VA
	Prince William County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Pulaski County	138	Roanoke, VA
	Radford city	138	Roanoke, VA
	Rappahannock County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Richmond city	137	Richmond, VA
	Richmond County	137	Richmond, VA
	Roanoke city	138	Roanoke, VA
	Roanoke County	138	Roanoke, VA
	Rockbridge County	71	Harrisonburg, VA
	Rockingham County	71	Harrisonburg, VA
	Russell County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Salem city	138	Roanoke, VA

	Scott County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Shenandoah County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Smyth County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Southampton County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Spotsylvania County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Stafford County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Staunton city	71	Harrisonburg, VA
	Suffolk city	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Surry County	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Sussex County	137	Richmond, VA
	Tazewell County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Virginia Beach city	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Warren County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Washington County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Waynesboro city	71	Harrisonburg, VA
	Westmoreland County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Williamsburg city	173	Virginia Beach-Norfolk-Newport News, VA-NC
	Winchester city	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Wise County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Wythe County	138	Roanoke, VA
	York County	173	Virginia Beach-Norfolk-Newport News, VA-NC
Washington	Adams County	177	Wenatchee, WA
	Asotin County	93	Lewiston, ID-WA
	Benton County	86	Kennewick-Richland-Pasco, WA
	Chelan County	177	Wenatchee, WA
	Clallam County	152	Seattle-Tacoma-Olympia, WA
	Clark County	131	Portland-Vancouver-Beaverton, OR-WA
	Columbia County	86	Kennewick-Richland-Pasco, WA
	Cowlitz County	131	Portland-Vancouver-Beaverton, OR-WA
	Douglas County	177	Wenatchee, WA
	Ferry County	157	Spokane, WA
	Franklin County	86	Kennewick-Richland-Pasco, WA
	Garfield County	93	Lewiston, ID-WA
	Grant County	177	Wenatchee, WA
	Grays Harbor County	152	Seattle-Tacoma-Olympia, WA
	Island County	152	Seattle-Tacoma-Olympia, WA
	Jefferson County	152	Seattle-Tacoma-Olympia, WA
	King County	152	Seattle-Tacoma-Olympia, WA
	Kitsap County	152	Seattle-Tacoma-Olympia, WA
	Kittitas County	152	Seattle-Tacoma-Olympia, WA
	Klickitat County	131	Portland-Vancouver-Beaverton, OR-WA
	Lewis County	152	Seattle-Tacoma-Olympia, WA
	Lincoln County	157	Spokane, WA
	Mason County	152	Seattle-Tacoma-Olympia, WA
	Okanogan County	177	Wenatchee, WA
	Pacific County	152	Seattle-Tacoma-Olympia, WA
	Pend Oreille County	157	Spokane, WA
	Pierce County	152	Seattle-Tacoma-Olympia, WA
	San Juan County	152	Seattle-Tacoma-Olympia, WA
	Skagit County	152	Seattle-Tacoma-Olympia, WA
	Skamania County	131	Portland-Vancouver-Beaverton, OR-WA
	Snohomish County	152	Seattle-Tacoma-Olympia, WA
	Spokane County	157	Spokane, WA
	Stevens County	157	Spokane, WA
	Thurston County	152	Seattle-Tacoma-Olympia, WA
	Wahkiakum County	131	Portland-Vancouver-Beaverton, OR-WA
	Walla Walla County	86	Kennewick-Richland-Pasco, WA
	Whatcom County	152	Seattle-Tacoma-Olympia, WA
	Whitman County	157	Spokane, WA
	Yakima County	86	Kennewick-Richland-Pasco, WA
West Virginia	Barbour County	34	Clarksburg, WV + Morgantown, WV
	Berkeley County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Boone County	29	Charleston, WV
	Braxton County	29	Charleston, WV
	Brooke County	129	Pittsburgh-New Castle, PA
West Virginia	Cabell County	29	Charleston, WV
	Calhoun County	29	Charleston, WV
	Clay County	29	Charleston, WV
	Doddridge County	34	Clarksburg, WV + Morgantown, WV
	Fayette County	29	Charleston, WV
	Gilmer County	29	Charleston, WV
	Grant County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Greenbrier County	29	Charleston, WV
	Hampshire County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Hancock County	129	Pittsburgh-New Castle, PA
	Hardy County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Harrison County	34	Clarksburg, WV + Morgantown, WV
	Jackson County	29	Charleston, WV
	Jefferson County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Kanawha County	29	Charleston, WV
	Lewis County	34	Clarksburg, WV + Morgantown, WV
	Lincoln County	29	Charleston, WV
	Logan County	29	Charleston, WV
	Marion County	34	Clarksburg, WV + Morgantown, WV
	Marshall County	129	Pittsburgh-New Castle, PA
	Mason County	40	Columbus-Marion-Chillicothe, OH
	McDowell County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Mercer County	81	Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA
	Mineral County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Mingo County	94	Lexington-Fayette--Frankfort--Richmond, KY
	Monongalia County	34	Clarksburg, WV + Morgantown, WV
	Monroe County	138	Roanoke, VA
	Morgan County	174	Washington-Baltimore-Northern Virginia, DC-MD-VA-WV
	Nicholas County	29	Charleston, WV
	Ohio County	129	Pittsburgh-New Castle, PA
	Pendleton County	71	Harrisonburg, VA
	Pleasants County	29	Charleston, WV

	Pocahontas County	29	Charleston, WV
	Preston County	34	Clarksburg, WV + Morgantown, WV
	Putnam County	29	Charleston, WV
	Raleigh County	29	Charleston, WV
	Randolph County	29	Charleston, WV
	Ritchie County	29	Charleston, WV
	Roane County	29	Charleston, WV
	Summers County	29	Charleston, WV
	Taylor County	34	Clarksburg, WV + Morgantown, WV
	Tucker County	29	Charleston, WV
	Tyler County	129	Pittsburgh-New Castle, PA
	Upshur County	34	Clarksburg, WV + Morgantown, WV
	Wayne County	29	Charleston, WV
	Webster County	29	Charleston, WV
	Wetzel County	129	Pittsburgh-New Castle, PA
	Wirt County	29	Charleston, WV
	Wood County	29	Charleston, WV
	Wyoming County	29	Charleston, WV
Wisconsin	Adams County	101	Madison-Baraboo, WI
	Ashland County	176	Wausau-Merrill, WI
	Barron County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Bayfield County	176	Wausau-Merrill, WI
	Brown County	9	Appleton-Oshkosh-Neenah, WI
	Buffalo County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Burnett County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Calumet County	9	Appleton-Oshkosh-Neenah, WI
	Chippewa County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Clark County	176	Wausau-Merrill, WI
	Columbia County	101	Madison-Baraboo, WI
	Crawford County	101	Madison-Baraboo, WI
	Dane County	101	Madison-Baraboo, WI
	Dodge County	108	Milwaukee-Racine-Waukesha, WI
	Door County	9	Appleton-Oshkosh-Neenah, WI
	Douglas County	50	Duluth, MN-WI
	Dunn County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Eau Claire County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Florence County	102	Marinette, WI-MI
	Fond du Lac County	108	Milwaukee-Racine-Waukesha, WI
	Forest County	176	Wausau-Merrill, WI
	Grant County	101	Madison-Baraboo, WI
	Green County	101	Madison-Baraboo, WI
	Green Lake County	108	Milwaukee-Racine-Waukesha, WI
	Iowa County	101	Madison-Baraboo, WI
	Iron County	176	Wausau-Merrill, WI
	Jackson County	89	La Crosse, WI-MN
	Jefferson County	108	Milwaukee-Racine-Waukesha, WI
	Juneau County	101	Madison-Baraboo, WI
	Kenosha County	32	Chicago-Naperville-Michigan City, IL-IN-WI
	Kewaunee County	9	Appleton-Oshkosh-Neenah, WI
	La Crosse County	89	La Crosse, WI-MN
	Lafayette County	101	Madison-Baraboo, WI
	Langlade County	176	Wausau-Merrill, WI
	Lincoln County	176	Wausau-Merrill, WI
	Manitowoc County	108	Milwaukee-Racine-Waukesha, WI
	Marathon County	176	Wausau-Merrill, WI
	Marinette County	102	Marinette, WI-MI
	Marquette County	101	Madison-Baraboo, WI
	Menominee County	9	Appleton-Oshkosh-Neenah, WI
	Milwaukee County	108	Milwaukee-Racine-Waukesha, WI
	Monroe County	89	La Crosse, WI-MN
	Oconto County	9	Appleton-Oshkosh-Neenah, WI
	Oneida County	176	Wausau-Merrill, WI
	Outagamie County	9	Appleton-Oshkosh-Neenah, WI
	Ozaukee County	108	Milwaukee-Racine-Waukesha, WI
Wisconsin	Pepin County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Pierce County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Polk County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Portage County	176	Wausau-Merrill, WI
	Price County	176	Wausau-Merrill, WI
	Racine County	108	Milwaukee-Racine-Waukesha, WI
	Richland County	101	Madison-Baraboo, WI
	Rock County	101	Madison-Baraboo, WI
	Rusk County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Sauk County	101	Madison-Baraboo, WI
	Sawyer County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Shawano County	9	Appleton-Oshkosh-Neenah, WI
	Sheboygan County	108	Milwaukee-Racine-Waukesha, WI
	St. Croix County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Taylor County	176	Wausau-Merrill, WI
	Trempealeau County	89	La Crosse, WI-MN
	Vernon County	89	La Crosse, WI-MN
	Vilas County	176	Wausau-Merrill, WI
	Walworth County	108	Milwaukee-Racine-Waukesha, WI
	Washburn County	109	Minneapolis-St. Paul-St. Cloud, MN-WI
	Washington County	108	Milwaukee-Racine-Waukesha, WI
	Waukesha County	108	Milwaukee-Racine-Waukesha, WI
	Waupaca County	9	Appleton-Oshkosh-Neenah, WI
	Waushara County	9	Appleton-Oshkosh-Neenah, WI
	Winnebago County	9	Appleton-Oshkosh-Neenah, WI
	Wood County	176	Wausau-Merrill, WI
	Albany County	45	Denver-Aurora-Boulder, CO
	Big Horn County	18	Billings, MT
	Campbell County	26	Casper, WY
	Carbon County	26	Casper, WY
	Converse County	26	Casper, WY
	Crook County	26	Casper, WY
	Fremont County	26	Casper, WY

Wyoming	Goshen County	150	Scotts Bluff, NE
	Hot Springs County	18	Billings, MT
	Johnson County	26	Casper, WY
	Laramie County	45	Denver-Aurora-Boulder, CO
	Lincoln County	26	Casper, WY
	Natrona County	26	Casper, WY
	Niobrara County	26	Casper, WY
	Park County	18	Billings, MT
	Platte County	26	Casper, WY
	Sheridan County	18	Billings, MT
	Sublette County	26	Casper, WY
	Sweetwater County	26	Casper, WY
	Teton County	26	Casper, WY
	Uinta County	26	Casper, WY
	Washakie County	26	Casper, WY
	Weston County	26	Casper, WY

APPENDIX G

Appendix Table G.1
Availability of Women in 45 On-Site Construction Occupations, Nationwide,
American Community Survey, 2006-2008

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Occupation	Total Workers in this Occupation Alone	Total Workers in this Occupation's Similar Occupations Group	Women in this Occupation Alone	Women in this Occupation's Similar Occupations Group	% Women in this Occupation Alone	% Women in this Occupation's Similar Occupations Group	Difference in %s	% Women in this Occupation using the Higher %
(1)	47-4011.00 Construction & Building Inspectors	111,643	4,071,438	12,594	489,675	11.3%	12.0%	0.7%	12.0%
(2)	47-2011.00 Boilermakers	21,785	8,307,168	267	370,148	1.2%	4.5%	3.2%	4.5%
(3)	47-2021.00 Brickmasons & Blockmasons	121,519	13,418,585	1,141	1,012,990	0.9%	7.5%	6.6%	7.5%
(4)	47-2022.00 Stonemasons	121,519	4,530,714	1,141	217,146	0.9%	4.8%	3.9%	4.8%
(5)	47-2031.01 Construction Carpenters	864,016	16,358,364	15,557	1,140,075	1.8%	7.0%	5.2%	7.0%
(6)	47-2031.02 Rough Carpenters	864,016	13,387,557	15,557	1,011,859	1.8%	7.6%	5.8%	7.6%
(7)	47-2041.00 Carpet Installers	65,388	9,869,015	1,549	815,074	2.4%	8.3%	5.9%	8.3%
(8)	47-2042.00 Floor Layers, Ex. Carpet, Wood & Tile	65,388	10,660,124	1,549	1,339,769	2.4%	12.6%	10.2%	12.6%
(9)	47-2043.00 Floor Sanders & Finishers	65,388	10,670,011	1,549	1,761,032	2.4%	16.5%	14.1%	16.5%
(10)	47-2044.00 Tile & Marble Setters	65,388	13,640,303	1,549	1,234,325	2.4%	9.0%	6.7%	9.0%
(11)	47-2051.00 Cement Masons & Concrete Finishers	52,250	8,516,010	1,113	417,184	2.1%	4.9%	2.8%	4.9%
(12)	47-2053.00 Terrazzo Workers & Finishers	52,250	9,171,605	1,113	459,201	2.1%	5.0%	2.9%	5.0%
(13)	47-2071.00 Paving, Surfacing & Tamping Equip. Ops.	23,900	8,762,165	696	896,594	2.9%	10.2%	7.3%	10.2%
(14)	47-2072.00 Pile-Driver Operators	--	10,873,722	--	1,228,829	--	11.3%	--	11.3%
(15)	47-2073.00 Op. Engin. & Other Constr. Equip. Ops.	441,189	10,497,817	10,258	1,020,039	2.3%	9.7%	7.4%	9.7%
(16)	47-2081.00 Drywall & Ceiling Tile Installers	116,343	13,315,565	2,915	993,863	2.5%	7.5%	5.0%	7.5%
(17)	47-2082.00 Tapers	116,343	10,801,917	2,915	1,569,026	2.5%	14.5%	12.0%	14.5%
(18)	47-2111.00 Electricians	856,171	15,365,392	19,509	635,117	2.3%	4.1%	1.9%	4.1%
(19)	47-2121.00 Glaziers	50,409	12,207,323	710	1,076,277	1.4%	8.8%	7.4%	8.8%
(20)	47-2131.00 Insulation Workers, Floor, Ceiling & Wall	25,129	12,220,869	939	1,707,058	3.7%	14.0%	10.2%	14.0%

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
(21)	47-2132.00	Insulation Workers, Mechanical	25,129	13,279,486	939	501,855	3.7%	3.8%	0.0%	3.8%
(22)	47-2141.00	Painters, Construction & Maintenance	704,494	12,866,017	51,373	1,301,211	7.3%	10.1%	2.8%	10.1%
(23)	47-2142.00	Paperhangers	10,501	12,232,376	2,276	1,836,933	21.7%	15.0%	-6.7%	21.7%
(24)	47-2151.00	Pipelayers	217,319	10,647,360	3,322	1,241,417	1.5%	11.7%	10.1%	11.7%
(25)	47-2152.01	Pipe Fitters & Steamfitters	217,319	8,755,222	3,322	407,430	1.5%	4.7%	3.1%	4.7%
(26)	47-2152.02	Plumbers	217,319	16,606,045	3,322	995,094	1.5%	6.0%	4.5%	6.0%
(27)	47-2161.00	Plasterers & Stucco Masons	53,045	13,862,917	863	1,505,572	1.6%	10.9%	9.2%	10.9%
(28)	47-2171.00	Reinforcing Iron & Rebar Workers	11,770	7,753,823	212	977,443	1.8%	12.6%	10.8%	12.6%
(29)	47-2181.00	Roofers	259,901	12,321,394	3,579	1,273,989	1.4%	10.3%	9.0%	10.3%
(30)	47-2211.00	Sheet Metal Workers	148,536	7,958,355	6,440	369,152	4.3%	4.6%	0.3%	4.6%
(31)	47-2221.00	Structural Iron & Steel Workers	74,999	11,125,325	1,547	927,882	2.1%	8.3%	6.3%	8.3%
(32)	47-4021.00	Elevator Installers & Repairers	29,586	16,713,366	596	1,603,108	2.0%	9.6%	7.6%	9.6%
(33)	47-4031.00	Fence Erectors	37,590	10,096,281	940	1,421,555	2.5%	14.1%	11.6%	14.1%
(34)	47-4041.00	Hazardous Materials Removal Workers	32,770	9,825,435	5,223	487,864	15.9%	5.0%	-11.0%	15.9%
(35)	47-4051.00	Highway Maintenance Workers	104,906	11,438,236	3,667	1,091,017	3.5%	9.5%	6.0%	9.5%
(36)	47-4061.00	Rail-Track Laying Equip. Operators	10,786	11,156,387	8	1,028,544	0.1%	9.2%	9.1%	9.2%
(37)	47-4091.00	Segmental Pavers	55,196	12,553,896	2,398	1,876,805	4.3%	14.9%	10.6%	14.9%
(38)	47-2061.00	Construction Laborers	1,991,439	10,568,450	64,250	877,418	3.2%	8.3%	5.1%	8.3%
(39)	47-3011.00	Helpers--Brickmasons, Blockmasons	18,477	8,991,546	808	791,458	4.4%	8.8%	4.4%	8.8%
(40)	47-3012.00	Helpers--Carpenters	18,477	11,172,335	808	2,346,363	4.4%	21.0%	16.6%	21.0%
(41)	47-3013.00	Helpers--Electricians	18,477	11,980,331	808	1,493,550	4.4%	12.5%	8.1%	12.5%
(42)	47-3014.00	Helpers--Painters, Plasterers, etc.	18,477	16,583,462	808	2,686,881	4.4%	16.2%	11.8%	16.2%
(43)	47-3015.00	Helpers--Pipelayers, Plumbers, etc.	18,477	12,995,474	808	1,844,189	4.4%	14.2%	9.8%	14.2%
(44)	47-3016.00	Helpers--Roofers	18,477	10,276,752	808	1,561,905	4.4%	15.2%	10.8%	15.2%
(45)	47-4071.00	Septic Tank Servicers & Sewer Pipe Cl.	--	12,296,260	--	543,754	--	4.4%	--	4.4%
(46)	Average (weighted by Column (c))						3.0%	8.1%	5.1%	8.2%
(47)	Number and % of Occupations in which Difference is Negative							2	4.7%	
(48)	Average (weighted by (Column (c)) for EEO-1 Craft (Skilled) Occupations						2.7%	7.9%	5.2%	8.0%
(49)	Average (weighted by (Column (c)) for EEO-1 Laborer (Unskilled) Occupations						3.3%	8.6%	5.3%	8.6%

Appendix Table G.2
Availability of African Americans in 45 On-Site Construction Occupations,
Nationwide, American Community Survey, 2006-2008

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Occupation	Total Workers in this Occupation Alone	Total Workers in this Occupat- ion's Similar Occupat- ions Group	Af. Ams. in this Occupation Alone	Af. Ams. in this Occupation's Similar Occupations Group	% Af. Ams. in this Occupation Alone	% Af. in this Occupation's Similar Occupations Group	Differ- ence in %s	% Af. in this Occupation using the Higher %
(1)	47-4011.00 Construction & Building Inspectors	111,643	4,071,438	8,752	366,844	7.8%	9.0%	1.2%	9.0%
(2)	47-2011.00 Boilermakers	21,785	8,307,168	1,466	724,177	6.7%	8.7%	2.0%	8.7%
(3)	47-2021.00 Brickmasons & Blockmasons	121,519	13,418,585	13,317	1,284,993	11.0%	9.6%	-1.4%	11.0%
(4)	47-2022.00 Stonemasons	121,519	4,530,714	13,317	371,259	11.0%	8.2%	-2.8%	11.0%
(5)	47-2031.01 Construction Carpenters	864,016	16,358,364	43,091	1,502,841	5.0%	9.2%	4.2%	9.2%
(6)	47-2031.02 Rough Carpenters	864,016	13,387,557	43,091	1,279,232	5.0%	9.6%	4.6%	9.6%
(7)	47-2041.00 Carpet Installers	65,388	9,869,015	3,178	1,073,601	4.9%	10.9%	6.0%	10.9%
(8)	47-2042.00 Floor Layers, Ex. Carpet, Wood & Tile	65,388	10,660,124	3,178	1,150,144	4.9%	10.8%	5.9%	10.8%
(9)	47-2043.00 Floor Sanders & Finishers	65,388	10,670,011	3,178	1,095,208	4.9%	10.3%	5.4%	10.3%
(10)	47-2044.00 Tile & Marble Setters	65,388	13,640,303	3,178	1,259,096	4.9%	9.2%	4.4%	9.2%
(11)	47-2051.00 Cement Masons & Concrete Finishers	52,250	8,516,010	6,211	738,881	11.9%	8.7%	-3.2%	11.9%
(12)	47-2053.00 Terrazzo Workers & Finishers	52,250	9,171,605	6,211	780,937	11.9%	8.5%	-3.4%	11.9%
(13)	47-2071.00 Paving, Surfacing & Tamping Equip. Ops.	23,900	8,762,165	2,193	1,023,796	9.2%	11.7%	2.5%	11.7%
(14)	47-2072.00 Pile-Driver Operators	--	10,873,722	--	1,372,550	--	12.6%	--	12.6%
(15)	47-2073.00 Op. Engin. & Other Constr. Equip. Ops.	441,189	10,497,817	27,243	1,171,905	6.2%	11.2%	5.0%	11.2%
(16)	47-2081.00 Drywall & Ceiling Tile Installers	116,343	13,315,565	6,514	1,286,777	5.6%	9.7%	4.1%	9.7%
(17)	47-2082.00 Tapers	116,343	10,801,917	6,514	1,302,734	5.6%	12.1%	6.5%	12.1%
(18)	47-2111.00 Electricians	856,171	15,365,392	64,026	1,314,653	7.5%	8.6%	1.1%	8.6%
(19)	47-2121.00 Glaziers	50,409	12,207,323	2,130	1,295,484	4.2%	10.6%	6.4%	10.6%
(20)	47-2131.00 Insulation Workers, Floor, Ceiling & Wall	25,129	12,220,869	2,282	1,143,146	9.1%	9.4%	0.3%	9.4%

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
(21)	47-2132.00	Insulation Workers, Mechanical	25,129	13,279,486	2,282	1,170,981	9.1%	8.8%	-0.3%	9.1%
(22)	47-2141.00	Painters, Construction & Maintenance	704,494	12,866,017	49,559	1,265,262	7.0%	9.8%	2.8%	9.8%
(23)	47-2142.00	Paperhangers	10,501	12,232,376	497	1,589,142	4.7%	13.0%	8.3%	13.0%
(24)	47-2151.00	Pipelayers	217,319	10,647,360	16,194	1,059,996	7.5%	10.0%	2.5%	10.0%
(25)	47-2152.01	Pipe Fitters & Steamfitters	217,319	8,755,222	16,194	737,463	7.5%	8.4%	1.0%	8.4%
(26)	47-2152.02	Plumbers	217,319	16,606,045	16,194	1,522,595	7.5%	9.2%	1.7%	9.2%
(27)	47-2161.00	Plasterers & Stucco Masons	53,045	13,862,917	5,287	1,328,119	10.0%	9.6%	-0.4%	10.0%
(28)	47-2171.00	Reinforcing Iron & Rebar Workers	11,770	7,753,823	715	844,321	6.1%	10.9%	4.8%	10.9%
(29)	47-2181.00	Roofers	259,901	12,321,394	19,667	1,267,310	7.6%	10.3%	2.7%	10.3%
(30)	47-2211.00	Sheet Metal Workers	148,536	7,958,355	10,571	704,870	7.1%	8.9%	1.7%	8.9%
(31)	47-2221.00	Structural Iron & Steel Workers	74,999	11,125,325	5,408	1,224,129	7.2%	11.0%	3.8%	11.0%
(32)	47-4021.00	Elevator Installers & Repairers	29,586	16,713,366	1,841	1,528,219	6.2%	9.1%	2.9%	9.1%
(33)	47-4031.00	Fence Erectors	37,590	10,096,281	2,042	1,190,570	5.4%	11.8%	6.4%	11.8%
(34)	47-4041.00	Hazardous Materials Removal Workers	32,770	9,825,435	5,172	1,009,132	15.8%	10.3%	-5.5%	15.8%
(35)	47-4051.00	Highway Maintenance Workers	104,906	11,438,236	12,649	1,406,114	12.1%	12.3%	0.2%	12.3%
(36)	47-4061.00	Rail-Track Laying Equip. Operators	10,786	11,156,387	2,093	1,121,985	19.4%	10.1%	-9.3%	19.4%
(37)	47-4091.00	Segmental Pavers	55,196	12,553,896	5,321	1,540,053	9.6%	12.3%	2.6%	12.3%
(38)	47-2061.00	Construction Laborers	1,991,439	10,568,450	175,277	1,140,617	8.8%	10.8%	2.0%	10.8%
(39)	47-3011.00	Helpers--Brickmasons, Blockmasons	18,477	8,991,546	1,900	1,023,385	10.3%	11.4%	1.1%	11.4%
(40)	47-3012.00	Helpers--Carpenters	18,477	11,172,335	1,900	1,451,697	10.3%	13.0%	2.7%	13.0%
(41)	47-3013.00	Helpers--Electricians	18,477	11,980,331	1,900	1,494,921	10.3%	12.5%	2.2%	12.5%
(42)	47-3014.00	Helpers--Painters, Plasterers, etc.	18,477	16,583,462	1,900	1,960,610	10.3%	11.8%	1.5%	11.8%
(43)	47-3015.00	Helpers--Pipelayers, Plumbers, etc.	18,477	12,995,474	1,900	1,668,163	10.3%	12.8%	2.6%	12.8%
(44)	47-3016.00	Helpers--Roofers	18,477	10,276,752	1,900	1,377,372	10.3%	13.4%	3.1%	13.4%
(45)	47-4071.00	Septic Tank Servicers & Sewer Pipe Cl.	--	12,296,260	--	1,232,063	--	10.0%	--	10.0%
(46)	Average (weighted by Column (c))						7.3%	9.9%	2.6%	10.1%
(47)	Number and % of Occupations in which Difference is Negative							8	18.6%	
(48)	Average (weighted by (Column (c)) for EEO-1 Craft (Skilled) Occupations						6.8%	9.6%	2.8%	9.8%
(49)	Average (weighted by (Column (c)) for EEO-1 Laborer (Unskilled) Occupations						8.9%	10.9%	2.0%	10.9%

Appendix Table G.3
Availability of Asians in 45 On-Site Construction Occupations, Nationwide,
American Community Survey, 2006-2008

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Occupation	Total Workers in this Occupati on Alone	Total Workers in this Occupati on's Similar Occupations Group	Asians in this Occupation Alone	Asians in this Occupation's Similar Occupations Group	% Asians in this Occupation Alone	% Asians in this Occupation's Similar Occupations Group	Differ- ence in %s	% Asians in this Occupation using the Higher %
(1)	47-4011.00 Construction & Building Inspectors	111,643	4,071,438	2,456	190,178	2.2%	12.0%	9.8%	12.0%
(2)	47-2011.00 Boilermakers	21,785	8,307,168	202	164,734	0.9%	2.0%	1.1%	2.0%
(3)	47-2021.00 Brickmasons & Blockmasons	121,519	13,418,585	1,036	299,233	0.9%	2.2%	1.4%	2.2%
(4)	47-2022.00 Stonemasons	121,519	4,530,714	1,036	77,112	0.9%	1.7%	0.8%	1.7%
(5)	47-2031.01 Construction Carpenters	864,016	16,358,364	24,604	435,345	2.8%	2.7%	-0.2%	2.8%
(6)	47-2031.02 Rough Carpenters	864,016	13,387,557	24,604	334,606	2.8%	2.5%	-0.3%	2.8%
(7)	47-2041.00 Carpet Installers	65,388	9,869,015	1,000	191,522	1.5%	1.9%	0.4%	1.9%
(8)	47-2042.00 Floor Layers, Ex. Carpet, Wood & Tile	65,388	10,660,124	1,000	268,225	1.5%	2.5%	1.0%	2.5%
(9)	47-2043.00 Floor Sanders & Finishers	65,388	10,670,011	1,000	251,505	1.5%	2.4%	0.8%	2.4%
(10)	47-2044.00 Tile & Marble Setters	65,388	13,640,303	1,000	283,398	1.5%	2.1%	0.5%	2.1%
(11)	47-2051.00 Cement Masons & Concrete Finishers	52,250	8,516,010	210	138,661	0.4%	1.6%	1.2%	1.6%
(12)	47-2053.00 Terrazzo Workers & Finishers	52,250	9,171,605	210	154,834	0.4%	1.7%	1.3%	1.7%
(13)	47-2071.00 Paving, Surfacing & Tamping Equip. Ops.	23,900	8,762,165	57	198,552	0.2%	2.3%	2.0%	2.3%
(14)	47-2072.00 Pile-Driver Operators	--	10,873,722	--	262,000	--	--	--	--
(15)	47-2073.00 Op. Engin. & Other Constr. Equip. Ops.	441,189	10,497,817	3,369	309,814	0.8%	3.0%	2.2%	3.0%
(16)	47-2081.00 Drywall & Ceiling Tile Installers	116,343	13,315,565	917	294,317	0.8%	2.2%	1.4%	2.2%
(17)	47-2082.00 Tapers	116,343	10,801,917	917	265,714	0.8%	2.5%	1.7%	2.5%
(18)	47-2111.00 Electricians	856,171	15,365,392	17,230	357,406	2.0%	2.3%	0.3%	2.3%
(19)	47-2121.00 Glaziers	50,409	12,207,323	715	246,446	1.4%	2.0%	0.6%	2.0%
(20)	47-2131.00 Insulation Workers, Floor, Ceiling & Wall	25,129	12,220,869	160	267,688	0.6%	2.2%	1.5%	2.2%

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
(21) 47-2132.00	Insulation Workers, Mechanical	25,129	13,279,486	160	263,620	0.6%	1.8%	1.2%	1.8%
(22) 47-2141.00	Painters, Construction & Maintenance	704,494	12,866,017	14,609	237,115	2.1%	2.3%	0.2%	2.3%
(23) 47-2142.00	Paperhangers	10,501	12,232,376	273	297,576	2.6%	1.6%	-1.0%	2.6%
(24) 47-2151.00	Pipelayers	217,319	10,647,360	2,797	199,152	1.3%	2.1%	0.8%	2.1%
(25) 47-2152.01	Pipe Fitters & Steamfitters	217,319	8,755,222	2,797	224,302	1.3%	4.5%	3.2%	4.5%
(26) 47-2152.02	Plumbers	217,319	16,606,045	2,797	392,025	1.3%	1.6%	0.3%	1.6%
(27) 47-2161.00	Plasterers & Stucco Masons	53,045	13,862,917	189	264,840	0.4%	1.5%	1.1%	1.5%
(28) 47-2171.00	Reinforcing Iron & Rebar Workers	11,770	7,753,823	114	204,346	1.0%	3.0%	2.0%	3.0%
(29) 47-2181.00	Roofers	259,901	12,321,394	1,867	228,942	0.7%	1.3%	0.5%	1.3%
(30) 47-2211.00	Sheet Metal Workers	148,536	7,958,355	3,353	154,334	2.3%	3.4%	1.2%	3.4%
(31) 47-2221.00	Structural Iron & Steel Workers	74,999	11,125,325	1,216	271,238	1.6%	1.6%	-0.1%	1.6%
(32) 47-4021.00	Elevator Installers & Repairers	29,586	16,713,366	582	490,411	2.0%	1.5%	-0.5%	2.0%
(33) 47-4031.00	Fence Erectors	37,590	10,096,281	92	249,052	0.2%	1.7%	1.5%	1.7%
(34) 47-4041.00	Hazardous Materials Removal Workers	32,770	9,825,435	720	174,748	2.2%	2.7%	0.5%	2.7%
(35) 47-4051.00	Highway Maintenance Workers	104,906	11,438,236	753	262,717	0.7%	1.8%	1.1%	1.8%
(36) 47-4061.00	Rail-Track Laying Equip. Operators	10,786	11,156,387	305	203,474	2.8%	2.3%	-0.6%	2.8%
(37) 47-4091.00	Segmental Pavers	55,196	12,553,896	616	340,673	1.1%	0.0%	-1.1%	1.1%
(38) 47-2061.00	Construction Laborers	1,991,439	10,568,450	31,324	201,219	1.6%	1.9%	0.3%	1.9%
(39) 47-3011.00	Helpers--Brickmasons, Blockmasons	18,477	8,991,546	282	173,629	1.5%	3.7%	2.2%	3.7%
(40) 47-3012.00	Helpers--Carpenters	18,477	11,172,335	282	331,367	1.5%	2.9%	1.4%	2.9%
(41) 47-3013.00	Helpers--Electricians	18,477	11,980,331	282	323,327	1.5%	3.3%	1.7%	3.3%
(42) 47-3014.00	Helpers--Painters, Plasterers, etc.	18,477	16,583,462	282	390,228	1.5%	1.8%	0.3%	1.8%
(43) 47-3015.00	Helpers--Pipelayers, Plumbers, etc.	18,477	12,995,474	282	303,706	1.5%	2.1%	0.6%	2.1%
(44) 47-3016.00	Helpers--Roofers	18,477	10,276,752	282	271,597	1.5%	1.9%	0.3%	1.9%
(45) 47-4071.00	Septic Tank Servicers & Sewer Pipe Cl.	--	12,296,260	--	252,140	--	2.8%	--	2.8%
(46)	Average (weighted by Column (c))								
(47)	Number and % of Occupations in which Difference is Negative								
(48)	Average (weighted by (Column (c)) for EEO-1 Craft (Skilled) Occupations								
(49)	Average (weighted by (Column (c)) for EEO-1 Laborer (Unskilled) Occupations								
						1.8%	2.4%	0.6%	2.5%
							7	16.3%	
						1.8%	2.4%	0.6%	2.5%
						1.6%	1.9%	0.4%	1.9%

Appendix Table G.4
Availability of American Indians/Alaska Native and Native Hawaiians/Other Pacific Islanders (AINH)
in 45 On-Site Construction Occupations, Nationwide, American Community Survey, 2006-2008

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Occupation	Total Workers in this Occupation Alone	Total Workers in this Occupation's Similar Occupations Group	Total AINH in this Occupation Alone	AINH in this Occupation's Similar Occupations Group	% AINH in this Occupation Alone	% AINH in this Occupation's Similar Occupations Group	Difference in %s	% AINH in this Occupation Higher %
(1)	47-4011.00 Construction & Building Inspectors	111,643	4,071,438	2,218	68,842	2.0%	1.7%	-0.3%	2.0%
(2)	47-2011.00 Boilermakers	21,785	8,307,168	586	164,349	2.7%	2.0%	-0.7%	2.7%
(3)	47-2021.00 Brickmasons & Blockmasons	121,519	13,418,585	3,071	242,018	2.5%	1.8%	-0.7%	2.5%
(4)	47-2022.00 Stonemasons	121,519	4,530,714	3,071	88,635	2.5%	2.0%	-0.6%	2.5%
(5)	47-2031.01 Construction Carpenters	864,016	16,358,364	17,082	286,465	2.0%	1.8%	-0.2%	2.0%
(6)	47-2031.02 Rough Carpenters	864,016	13,387,557	17,082	237,049	2.0%	1.8%	-0.2%	2.0%
(7)	47-2041.00 Carpet Installers	65,388	9,869,015	1,007	205,227	1.5%	2.1%	0.5%	2.1%
(8)	47-2042.00 Floor Layers, Ex. Carpet, Wood & Tile	65,388	10,660,124	1,007	198,459	1.5%	1.9%	0.3%	1.9%
(9)	47-2043.00 Floor Sanders & Finishers	65,388	10,670,011	1,007	221,106	1.5%	2.1%	0.5%	2.1%
(10)	47-2044.00 Tile & Marble Setters	65,388	13,640,303	1,007	259,445	1.5%	1.9%	0.4%	1.9%
(11)	47-2051.00 Cement Masons & Concrete Finishers	52,250	8,516,010	1,369	173,732	2.6%	2.0%	-0.6%	2.6%
(12)	47-2053.00 Terrazzo Workers & Finishers	52,250	9,171,605	1,369	187,929	2.6%	2.0%	-0.6%	2.6%
(13)	47-2071.00 Paving, Surfacing & Tamping Equip. Ops.	23,900	8,762,165	483	181,088	2.0%	2.1%	0.0%	2.1%
(14)	47-2072.00 Pile-Driver Operators	--	10,873,722	0	200,957	--	1.8%	--	--
(15)	47-2073.00 Op. Engin. & Other Constr. Equip. Ops.	441,189	10,497,817	13,303	184,970	3.0%	1.8%	-1.3%	3.0%
(16)	47-2081.00 Drywall & Ceiling Tile Installers	116,343	13,315,565	2,640	246,813	2.3%	1.9%	-0.4%	2.3%
(17)	47-2082.00 Tapers	116,343	10,801,917	2,640	226,107	2.3%	2.1%	-0.2%	2.3%
(18)	47-2111.00 Electricians	856,171	15,365,392	15,229	272,674	1.8%	1.8%	0.0%	1.8%
(19)	47-2121.00 Glaziers	50,409	12,207,323	673	250,525	1.3%	2.1%	0.7%	2.1%
(20)	47-2131.00 Insulation Workers, Floor, Ceiling & Wall	25,129	12,220,869	503	250,408	2.0%	2.0%	0.0%	2.0%

(a)		(b)		(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
(21)	47-2132.00	Insulation Workers, Mechanical		25,129	13,279,486	503	244,722	2.0%	1.8%	-0.2%	2.0%
(22)	47-2141.00	Painters, Construction & Maintenance		704,494	12,866,017	12,668	269,509	1.8%	2.1%	0.3%	2.1%
(23)	47-2142.00	Paperhangers		10,501	12,232,376	86	235,039	0.8%	1.9%	1.1%	1.9%
(24)	47-2151.00	Pipelayers		217,319	10,647,360	4,171	219,783	1.9%	2.1%	0.1%	2.1%
(25)	47-2152.01	Pipe Fitters & Steamfitters		217,319	8,755,222	4,171	158,841	1.9%	1.8%	-0.1%	1.9%
(26)	47-2152.02	Plumbers		217,319	16,606,045	4,171	296,603	1.9%	1.8%	-0.1%	1.9%
(27)	47-2161.00	Plasterers & Stucco Masons		53,045	13,862,917	631	282,471	1.2%	2.0%	0.8%	2.0%
(28)	47-2171.00	Reinforcing Iron & Rebar Workers		11,770	7,753,823	272	146,923	2.3%	1.9%	-0.4%	2.3%
(29)	47-2181.00	Roofers		259,901	12,321,394	5,240	254,051	2.0%	2.1%	0.0%	2.1%
(30)	47-2211.00	Sheet Metal Workers		148,536	7,958,355	1,762	160,926	1.2%	2.0%	0.8%	2.0%
(31)	47-2221.00	Structural Iron & Steel Workers		74,999	11,125,325	2,782	201,687	3.7%	1.8%	-1.9%	3.7%
(32)	47-4021.00	Elevator Installers & Repairers		29,586	16,713,366	188	294,427	0.6%	1.8%	1.1%	1.8%
(33)	47-4031.00	Fence Erectors		37,590	10,096,281	939	194,367	2.5%	1.9%	-0.6%	2.5%
(34)	47-4041.00	Hazardous Materials Removal Workers		32,770	9,825,435	991	185,365	3.0%	1.9%	-1.1%	3.0%
(35)	47-4051.00	Highway Maintenance Workers		104,906	11,438,236	2,194	215,419	2.1%	1.9%	-0.2%	2.1%
(36)	47-4061.00	Rail-Track Laying Equip. Operators		10,786	11,156,387	352	232,861	3.3%	2.1%	-1.2%	3.3%
(37)	47-4091.00	Segmental Pavers		55,196	12,553,896	841	258,007	1.5%	2.1%	0.5%	2.1%
(38)	47-2061.00	Construction Laborers		1,991,439	10,568,450	45,033	219,721	2.3%	2.1%	-0.2%	2.3%
(39)	47-3011.00	Helpers--Brickmasons, Blockmasons		18,477	8,991,546	378	187,131	2.0%	2.1%	0.0%	2.1%
(40)	47-3012.00	Helpers--Carpenters		18,477	11,172,335	378	218,815	2.0%	2.0%	-0.1%	2.0%
(41)	47-3013.00	Helpers--Electricians		18,477	11,980,331	378	239,713	2.0%	2.0%	0.0%	2.0%
(42)	47-3014.00	Helpers--Painters, Plasterers, etc.		18,477	16,583,462	378	348,616	2.0%	2.1%	0.1%	2.1%
(43)	47-3015.00	Helpers--Pipelayers, Plumbers, etc.		18,477	12,995,474	378	270,716	2.0%	2.1%	0.0%	2.1%
(44)	47-3016.00	Helpers--Roofers		18,477	10,276,752	378	204,124	2.0%	2.0%	-0.1%	2.0%
(45)	47-4071.00	Septic Tank Servicers & Sewer Pipe Cl.		--	12,296,260	0	226,956	--	1.8%	--	1.8%
(46)	Average (weighted by Column (c))										
(47)	Number and % of Occupations in which Difference is Negative										
(48)	Average (weighted by (Column (c)) for EEO-1 Craft (Skilled) Occupations										
(49)	Average (weighted by (Column (c)) for EEO-1 Laborer (Unskilled) Occupations										
								2.1%	1.9%	-0.2%	2.2%
									25	58.1%	
								2.0%	1.9%	-0.1%	2.1%
								2.2%	2.1%	-0.2%	2.3%

Appendix Table G.5
Availability of Hispanics in 45 On-Site Construction Occupations, Nationwide,
American Community Survey, 2006-2008

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
	Occupation	Total Workers in this Occupati on Alone	Total Workers in this Occupati on's Similar Occupations Group	Hispanics in this Occupation Alone	Hispanics in this Occupation's Similar Occupations Group	% Hispanics in this Occupati on Alone	% Hispanics in this Occupati on's Similar Occupations Group	Differ- ence in %s	Hispanics in this Occupati on using the Higher %
(1)	47-4011.00 Construction & Building Inspectors	111,643	4,071,438	10,862	514,241	9.7%	12.6%	2.9%	12.6%
(2)	47-2011.00 Boilermakers	21,785	8,307,168	2,548	2,186,963	11.7%	26.3%	14.6%	26.3%
(3)	47-2021.00 Brickmasons & Blockmasons	121,519	13,418,585	42,107	2,849,161	34.7%	21.2%	-13.4%	34.7%
(4)	47-2022.00 Stonemasons	121,519	4,530,714	42,107	1,300,431	34.7%	28.7%	-5.9%	34.7%
(5)	47-2031.01 Construction Carpenters	864,016	16,358,364	220,300	3,005,994	25.5%	18.4%	-7.1%	25.5%
(6)	47-2031.02 Rough Carpenters	864,016	13,387,557	220,300	2,569,145	25.5%	19.2%	-6.3%	25.5%
(7)	47-2041.00 Carpet Installers	65,388	9,869,015	25,252	2,667,011	38.6%	27.0%	-11.6%	38.6%
(8)	47-2042.00 Floor Layers, Ex. Carpet, Wood & Tile	65,388	10,660,124	25,252	2,998,317	38.6%	28.1%	-10.5%	38.6%
(9)	47-2043.00 Floor Sanders & Finishers	65,388	10,670,011	25,252	3,415,628	38.6%	32.0%	-6.6%	38.6%
(10)	47-2044.00 Tile & Marble Setters	65,388	13,640,303	25,252	3,677,367	38.6%	27.0%	-11.7%	38.6%
(11)	47-2051.00 Cement Masons & Concrete Finishers	52,250	8,516,010	22,388	2,677,696	42.8%	31.4%	-11.4%	42.8%
(12)	47-2053.00 Terrazzo Workers & Finishers	52,250	9,171,605	22,388	2,731,479	42.8%	29.8%	-13.1%	42.8%
(13)	47-2071.00 Paving, Surfacing & Tamping Equip. Ops.	23,900	8,762,165	4,994	2,348,428	20.9%	26.8%	5.9%	26.8%
(14)	47-2072.00 Pile-Driver Operators	--	10,873,722	--	2,274,344	--	20.9%	--	20.9%
(15)	47-2073.00 Op. Engin. & Other Constr. Equip. Ops.	441,189	10,497,817	58,213	1,889,512	13.2%	18.0%	4.8%	18.0%
(16)	47-2081.00 Drywall & Ceiling Tile Installers	116,343	13,315,565	59,583	2,692,723	51.2%	20.2%	-31.0%	51.2%
(17)	47-2082.00 Tapers	116,343	10,801,917	59,583	3,277,854	51.2%	30.3%	-20.9%	51.2%
(18)	47-2111.00 Electricians	856,171	15,365,392	122,787	2,826,867	14.3%	18.4%	4.1%	18.4%
(19)	47-2121.00 Glaziers	50,409	12,207,323	8,314	3,369,199	16.5%	27.6%	11.1%	27.6%
(20)	47-2131.00 Insulation Workers, Floor, Ceiling & Wall	25,129	12,220,869	8,553	3,821,329	34.0%	31.3%	-2.8%	34.0%

(a)		(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
(21)	47-2132.00	Insulation Workers, Mechanical	25,129	13,279,486	0	2,546,520	0.0%	19.2%	19.2%	19.2%
(22)	47-2141.00	Painters, Construction & Maintenance	704,494	12,866,017	263,970	3,989,011	37.5%	31.0%	-6.5%	37.5%
(23)	47-2142.00	Paperhangers	10,501	12,232,376	1,188	2,998,550	11.3%	24.5%	13.2%	24.5%
(24)	47-2151.00	Pipelayers	217,319	10,647,360	42,905	3,174,443	19.7%	29.8%	10.1%	29.8%
(25)	47-2152.01	Pipe Fitters & Steamfitters	217,319	8,755,222	42,905	1,741,493	19.7%	19.9%	0.1%	19.9%
(26)	47-2152.02	Plumbers	217,319	16,606,045	42,905	3,156,084	19.7%	19.0%	-0.7%	19.7%
(27)	47-2161.00	Plasterers & Stucco Masons	53,045	13,862,917	30,430	4,306,616	57.4%	31.1%	-26.3%	57.4%
(28)	47-2171.00	Reinforcing Iron & Rebar Workers	11,770	7,753,823	3,490	1,775,127	29.7%	22.9%	-6.8%	29.7%
(29)	47-2181.00	Roofers	259,901	12,321,394	108,876	3,454,777	41.9%	28.0%	-13.9%	41.9%
(30)	47-2211.00	Sheet Metal Workers	148,536	7,958,355	19,608	2,193,123	13.2%	27.6%	14.4%	27.6%
(31)	47-2221.00	Structural Iron & Steel Workers	74,999	11,125,325	13,298	2,255,328	17.7%	20.3%	2.5%	20.3%
(32)	47-4021.00	Elevator Installers & Repairers	29,586	16,713,366	2,872	2,926,286	9.7%	17.5%	7.8%	17.5%
(33)	47-4031.00	Fence Erectors	37,590	10,096,281	12,066	3,076,941	32.1%	30.5%	-1.6%	32.1%
(34)	47-4041.00	Hazardous Materials Removal Workers	32,770	9,825,435	9,613	2,073,737	29.3%	21.1%	-8.2%	29.3%
(35)	47-4051.00	Highway Maintenance Workers	104,906	11,438,236	12,205	2,870,069	11.6%	25.1%	13.5%	25.1%
(36)	47-4061.00	Rail-Track Laying Equip. Operators	10,786	11,156,387	1,333	3,264,090	12.4%	29.3%	16.9%	29.3%
(37)	47-4091.00	Segmental Pavers	55,196	12,553,896	11,174	3,456,125	20.2%	27.5%	7.3%	27.5%
(38)	47-2061.00	Construction Laborers	1,991,439	10,568,450	736,271	3,032,353	37.0%	28.7%	-8.3%	37.0%
(39)	47-3011.00	Helpers--Brickmasons, Blockmasons	18,477	8,991,546	7,516	2,492,193	40.7%	27.7%	-13.0%	40.7%
(40)	47-3012.00	Helpers--Carpenters	18,477	11,172,335	7,516	3,364,052	40.7%	30.1%	-10.6%	40.7%
(41)	47-3013.00	Helpers--Electricians	18,477	11,980,331	7,516	3,042,729	40.7%	25.4%	-15.3%	40.7%
(42)	47-3014.00	Helpers--Painters, Plasterers, etc.	18,477	16,583,462	7,516	5,240,762	40.7%	31.6%	-9.1%	40.7%
(43)	47-3015.00	Helpers--Pipelayers, Plumbers, etc.	18,477	12,995,474	7,516	3,692,360	40.7%	28.4%	-12.3%	40.7%
(44)	47-3016.00	Helpers--Roofers	18,477	10,276,752	7,516	2,836,985	40.7%	27.6%	-13.1%	40.7%
(45)	47-4071.00	Septic Tank Servicers & Sewer Pipe Cl.	--	12,296,260	--	2,977,890	--	24.2%	--	24.2%
(46)	Average (weighted by Column (c))						28.6%	24.1%	-4.5%	30.3%
(47)	Number and % of Occupations in which Difference is Negative							27	62.8%	
(48)	Average (weighted by (Column (c)) for EEO-1 Craft (Skilled) Occupations						26.0%	22.8%	-3.2%	28.3%
(49)	Average (weighted by (Column (c)) for EEO-1 Laborer (Unskilled) Occupations						37.2%	28.7%	-8.5%	37.2%

APPENDIX H

Table H.1
Availabilities for Skilled and Unskilled Construction Occupations in
Local Labor Markets Calculated Using the Methodology in Chapter 6

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Economic Area	Occupation	Women	Hispanics	Whites	Af. Ams.	Asians	AI/NH
Nationwide	Craft Workers (Skilled)	7.9%	21.6%	65.0%	9.3%	2.2%	1.4%
	Laborers & Helpers (Unskilled)	9.8%	27.1%	57.8%	11.2%	1.9%	1.5%
	All On-Site Construction Occupations	8.3%	23.0%	63.2%	9.8%	2.1%	1.4%
Aberdeen, SD	Craft Workers (Skilled)	8.7%	0.9%	89.4%	0.1%	0.1%	9.4%
	Laborers & Helpers (Unskilled)	13.4%	2.6%	81.0%	0.5%	0.2%	15.6%
	All On-Site Construction Occupations	9.8%	1.3%	87.5%	0.2%	0.1%	10.8%
Abilene, TX	Craft Workers (Skilled)	6.4%	21.3%	74.7%	2.9%	0.0%	1.0%
	Laborers & Helpers (Unskilled)	5.7%	27.8%	67.1%	3.0%	0.1%	1.5%
	All On-Site Construction Occupations	6.2%	22.9%	72.8%	2.9%	0.1%	1.1%
Albany, GA	Craft Workers (Skilled)	7.9%	8.3%	65.2%	25.1%	0.3%	0.8%
	Laborers & Helpers (Unskilled)	11.4%	11.3%	55.6%	32.0%	0.3%	0.8%
	All On-Site Construction Occupations	9.1%	9.3%	62.0%	27.4%	0.3%	0.8%
Albany-Schenectady-Amsterdam, NY	Craft Workers (Skilled)	7.2%	2.7%	93.1%	2.4%	0.5%	1.0%
	Laborers & Helpers (Unskilled)	10.5%	1.8%	93.2%	3.0%	0.5%	1.0%
	All On-Site Construction Occupations	8.0%	2.5%	93.2%	2.5%	0.5%	1.0%
Albuquerque, NM	Craft Workers (Skilled)	6.9%	54.8%	31.4%	2.1%	0.5%	10.8%
	Laborers & Helpers (Unskilled)	6.5%	65.2%	22.6%	1.1%	0.3%	10.1%
	All On-Site Construction Occupations	6.8%	57.8%	29.0%	1.8%	0.4%	10.6%
Alpena, MI	Craft Workers (Skilled)	6.7%	2.3%	95.7%	0.1%	0.2%	1.7%
	Laborers & Helpers (Unskilled)	10.9%	1.8%	95.3%	0.0%	0.4%	2.4%
	All On-Site Construction Occupations	7.5%	2.2%	95.7%	0.1%	0.2%	1.8%
Amarillo, TX	Craft Workers (Skilled)	6.6%	39.6%	55.3%	2.2%	0.5%	2.0%
	Laborers & Helpers (Unskilled)	7.8%	44.8%	47.8%	5.1%	0.6%	0.8%
	All On-Site Construction Occupations	6.9%	41.1%	53.2%	3.1%	0.5%	1.7%
Anchorage, AK	Craft Workers (Skilled)	5.3%	3.7%	74.5%	1.8%	2.1%	16.7%
	Laborers & Helpers (Unskilled)	8.8%	7.0%	64.1%	2.2%	2.1%	23.4%
	All On-Site Construction Occupations	6.0%	4.3%	72.4%	1.8%	2.1%	18.0%
Appleton-Oshkosh-Neenah, WI	Craft Workers (Skilled)	8.6%	2.5%	94.3%	0.8%	0.9%	1.5%
	Laborers & Helpers (Unskilled)	14.4%	2.8%	93.4%	0.7%	0.6%	2.4%
	All On-Site Construction Occupations	9.8%	2.5%	94.1%	0.8%	0.9%	1.7%
Asheville-Brevard, NC	Craft Workers (Skilled)	8.9%	7.8%	87.6%	2.6%	0.3%	1.5%
	Laborers & Helpers (Unskilled)	12.3%	8.4%	85.1%	3.4%	1.1%	1.9%
	All On-Site Construction Occupations	9.7%	7.9%	87.1%	2.8%	0.5%	1.6%
Atlanta-Sandy Springs-Gainesville, GA-	Craft Workers (Skilled)	8.0%	19.0%	58.8%	19.3%	1.6%	0.7%
	Laborers & Helpers (Unskilled)	11.8%	28.1%	46.7%	23.0%	1.0%	0.6%
	All On-Site Construction Occupations	9.1%	21.5%	55.5%	20.3%	1.4%	0.7%
Augusta-Richmond County, GA-SC	Craft Workers (Skilled)	10.0%	3.8%	59.4%	35.5%	0.2%	0.9%
	Laborers & Helpers (Unskilled)	12.2%	5.5%	48.6%	44.4%	0.2%	0.8%
	All On-Site Construction Occupations	10.6%	4.2%	56.6%	37.8%	0.2%	0.9%
Austin-Round Rock, TX	Craft Workers (Skilled)	6.1%	49.6%	42.4%	4.9%	1.7%	0.6%
	Laborers & Helpers (Unskilled)	7.2%	61.0%	32.3%	5.1%	0.7%	0.6%
	All On-Site Construction Occupations	6.4%	52.8%	39.5%	4.9%	1.4%	0.6%
Bangor, ME	Craft Workers (Skilled)	6.2%	0.9%	96.8%	0.3%	0.2%	1.8%
	Laborers & Helpers (Unskilled)	10.4%	2.0%	94.6%	0.1%	0.0%	3.1%
	All On-Site Construction Occupations	7.1%	1.1%	96.4%	0.3%	0.1%	2.1%
Baton Rouge-Pierre Part, LA	Craft Workers (Skilled)	5.6%	4.9%	61.8%	31.3%	0.8%	0.7%
	Laborers & Helpers (Unskilled)	7.0%	6.1%	53.0%	38.6%	0.3%	1.1%
	All On-Site Construction Occupations	5.9%	5.2%	59.9%	32.9%	0.7%	0.8%

Table H.1 -- continued

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Economic Area	Occupation	Women	Hispanics	Whites	Af. Ams.	Asians	AI/NH
Beaumont-Port Arthur, TX	Craft Workers (Skilled)	5.8%	12.6%	67.5%	18.2%	0.8%	0.6%
	Laborers & Helpers (Unskilled)	6.5%	21.0%	55.0%	21.7%	1.4%	0.4%
	All On-Site Construction Occupations	6.0%	14.5%	64.8%	19.0%	0.9%	0.5%
Bend-Prineville, OR	Craft Workers (Skilled)	10.4%	12.7%	84.0%	0.3%	0.5%	2.4%
	Laborers & Helpers (Unskilled)	9.7%	17.5%	80.5%	0.0%	0.1%	1.9%
	All On-Site Construction Occupations	10.2%	14.0%	83.0%	0.2%	0.4%	2.2%
Billings, MT	Craft Workers (Skilled)	7.3%	5.0%	88.7%	0.2%	0.1%	6.0%
	Laborers & Helpers (Unskilled)	10.3%	7.2%	84.4%	0.4%	0.0%	7.9%
	All On-Site Construction Occupations	8.1%	5.5%	87.6%	0.3%	0.0%	6.5%
Birmingham-Hoover-Cullman, AL	Craft Workers (Skilled)	9.2%	5.8%	71.6%	21.4%	0.1%	1.0%
	Laborers & Helpers (Unskilled)	10.7%	11.0%	60.3%	27.7%	0.0%	0.9%
	All On-Site Construction Occupations	9.6%	7.2%	68.6%	23.1%	0.1%	1.0%
Bismarck, ND	Craft Workers (Skilled)	7.4%	1.1%	86.2%	0.1%	0.1%	12.3%
	Laborers & Helpers (Unskilled)	9.4%	2.2%	81.0%	0.4%	0.2%	16.2%
	All On-Site Construction Occupations	7.8%	1.3%	85.1%	0.2%	0.1%	13.2%
Boise City-Nampa, ID	Craft Workers (Skilled)	9.2%	15.7%	79.8%	0.7%	0.7%	2.6%
	Laborers & Helpers (Unskilled)	13.2%	18.2%	78.2%	0.9%	1.2%	1.5%
	All On-Site Construction Occupations	10.0%	16.2%	79.5%	0.7%	0.8%	2.4%
Boston-Worcester-Manchester, MA-NH	Craft Workers (Skilled)	7.4%	7.9%	84.7%	3.1%	2.2%	0.6%
	Laborers & Helpers (Unskilled)	9.4%	11.0%	80.4%	4.1%	1.8%	0.6%
	All On-Site Construction Occupations	7.8%	8.5%	83.8%	3.3%	2.1%	0.6%
Buffalo-Niagara-Cattaraugus, NY	Craft Workers (Skilled)	8.1%	2.4%	90.6%	5.6%	0.4%	0.9%
	Laborers & Helpers (Unskilled)	11.0%	2.9%	86.8%	8.4%	0.6%	1.1%
	All On-Site Construction Occupations	8.7%	2.5%	89.8%	6.2%	0.4%	0.9%
Burlington-South Burlington, VT	Craft Workers (Skilled)	8.4%	0.6%	97.8%	0.1%	0.2%	1.3%
	Laborers & Helpers (Unskilled)	12.7%	0.2%	98.1%	0.1%	0.5%	1.1%
	All On-Site Construction Occupations	9.2%	0.6%	97.8%	0.1%	0.3%	1.3%
Cape Girardeau-Jackson, MO-IL	Craft Workers (Skilled)	7.5%	0.8%	95.0%	3.1%	0.3%	0.9%
	Laborers & Helpers (Unskilled)	9.8%	1.3%	92.9%	4.3%	0.2%	1.3%
	All On-Site Construction Occupations	8.1%	0.9%	94.4%	3.4%	0.3%	1.0%
Casper, WY	Craft Workers (Skilled)	8.1%	9.6%	88.5%	0.4%	0.3%	1.2%
	Laborers & Helpers (Unskilled)	12.4%	16.1%	79.8%	1.1%	1.0%	1.9%
	All On-Site Construction Occupations	9.1%	11.2%	86.4%	0.5%	0.5%	1.4%
Cedar Rapids, IA	Craft Workers (Skilled)	10.4%	3.2%	94.3%	1.0%	0.7%	0.8%
	Laborers & Helpers (Unskilled)	14.9%	5.7%	91.2%	1.9%	0.7%	0.4%
	All On-Site Construction Occupations	11.6%	3.8%	93.5%	1.2%	0.7%	0.7%
Champaign-Urbana, IL	Craft Workers (Skilled)	10.5%	1.8%	93.3%	3.7%	0.4%	0.7%
	Laborers & Helpers (Unskilled)	11.6%	2.3%	89.4%	7.0%	0.5%	0.6%
	All On-Site Construction Occupations	10.8%	1.9%	92.4%	4.5%	0.5%	0.7%
Charleston, WV	Craft Workers (Skilled)	4.5%	0.6%	97.5%	1.3%	0.2%	0.3%
	Laborers & Helpers (Unskilled)	8.0%	0.6%	97.4%	1.3%	0.2%	0.5%
	All On-Site Construction Occupations	5.2%	0.6%	97.4%	1.3%	0.2%	0.3%
Charleston-North Charleston, SC	Craft Workers (Skilled)	8.0%	6.4%	59.4%	31.0%	0.9%	1.8%
	Laborers & Helpers (Unskilled)	8.2%	9.6%	48.0%	39.2%	0.2%	2.4%
	All On-Site Construction Occupations	8.1%	7.3%	56.3%	33.2%	0.8%	2.0%
Charlotte-Gastonia Salisbury, NC-SC	Craft Workers (Skilled)	9.2%	14.5%	67.4%	15.5%	1.2%	0.9%
	Laborers & Helpers (Unskilled)	14.6%	18.9%	58.7%	20.6%	1.1%	0.4%
	All On-Site Construction Occupations	10.4%	15.5%	65.5%	16.7%	1.2%	0.8%
Chicago-Naperville-Michigan City, IL-	Craft Workers (Skilled)	7.8%	25.1%	62.3%	10.1%	1.8%	0.3%
	Laborers & Helpers (Unskilled)	10.2%	32.5%	52.1%	13.1%	1.2%	0.5%
	All On-Site Construction Occupations	8.4%	26.9%	59.9%	10.8%	1.7%	0.4%
Cincinnati-Middletown-Wilmington, OH-	Craft Workers (Skilled)	9.0%	1.6%	90.1%	7.1%	0.5%	0.6%
	Laborers & Helpers (Unskilled)	12.7%	2.8%	85.3%	9.9%	1.0%	0.8%
	All On-Site Construction Occupations	10.0%	1.9%	88.8%	7.9%	0.6%	0.6%

Table H.1 -- continued

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Economic Area	Occupation	Women	Hispanics	Whites	Af. Ams.	Asians	AI/NH
Clarksburg, WV + Morgantown, WV	Craft Workers (Skilled)	4.1%	0.1%	98.7%	0.7%	0.1%	0.3%
	Laborers & Helpers (Unskilled)	7.1%	0.4%	96.1%	3.0%	0.0%	0.4%
	All On-Site Construction Occupations	4.8%	0.2%	98.1%	1.3%	0.1%	0.3%
Cleveland-Akron-Elyria, OH	Craft Workers (Skilled)	10.4%	2.7%	87.5%	8.5%	0.6%	0.6%
	Laborers & Helpers (Unskilled)	12.4%	3.3%	84.3%	11.0%	0.6%	0.5%
	All On-Site Construction Occupations	10.9%	2.8%	86.7%	9.1%	0.6%	0.6%
Colorado Springs, CO	Craft Workers (Skilled)	6.7%	20.5%	72.9%	3.1%	0.6%	1.8%
	Laborers & Helpers (Unskilled)	6.4%	21.8%	70.6%	3.1%	1.8%	2.2%
	All On-Site Construction Occupations	6.6%	20.8%	72.4%	3.1%	0.9%	1.9%
Columbia, MO	Craft Workers (Skilled)	8.5%	1.7%	94.6%	2.6%	0.3%	0.7%
	Laborers & Helpers (Unskilled)	11.1%	2.3%	93.7%	2.6%	0.3%	1.2%
	All On-Site Construction Occupations	9.3%	1.9%	94.3%	2.6%	0.3%	0.8%
Columbia-Newberry, SC	Craft Workers (Skilled)	8.8%	6.1%	58.2%	34.2%	0.4%	0.8%
	Laborers & Helpers (Unskilled)	11.7%	8.4%	48.4%	42.3%	0.2%	0.3%
	All On-Site Construction Occupations	9.6%	6.7%	55.7%	36.2%	0.3%	0.7%
Columbus-Auburn-Opelika, GA-AL	Craft Workers (Skilled)	10.1%	5.2%	58.5%	35.1%	0.4%	0.6%
	Laborers & Helpers (Unskilled)	12.5%	7.0%	51.7%	40.4%	0.3%	0.3%
	All On-Site Construction Occupations	10.8%	5.7%	56.6%	36.6%	0.3%	0.5%
Columbus-Marion-Chillicothe, OH	Craft Workers (Skilled)	9.7%	2.8%	89.3%	6.4%	0.5%	0.9%
	Laborers & Helpers (Unskilled)	13.6%	2.8%	87.3%	8.4%	0.5%	0.9%
	All On-Site Construction Occupations	10.6%	2.8%	88.8%	6.9%	0.5%	0.9%
Corpus Christi-Kingsville, TX	Craft Workers (Skilled)	4.2%	75.5%	21.7%	2.1%	0.3%	0.4%
	Laborers & Helpers (Unskilled)	5.9%	81.0%	15.2%	2.0%	0.7%	1.0%
	All On-Site Construction Occupations	4.6%	76.8%	20.1%	2.1%	0.4%	0.5%
Dallas-Fort Worth, TX	Craft Workers (Skilled)	7.1%	41.3%	46.7%	8.4%	1.7%	1.6%
	Laborers & Helpers (Unskilled)	7.5%	51.6%	36.0%	9.7%	1.0%	1.4%
	All On-Site Construction Occupations	7.2%	44.3%	43.6%	8.8%	1.5%	1.5%
Davenport-Moline-Rock Island, IA-IL	Craft Workers (Skilled)	9.8%	3.9%	92.2%	2.2%	0.8%	0.8%
	Laborers & Helpers (Unskilled)	14.4%	4.0%	90.3%	4.4%	0.3%	0.4%
	All On-Site Construction Occupations	10.7%	3.9%	91.8%	2.7%	0.7%	0.7%
Dayton-Springfield-Greenville, OH	Craft Workers (Skilled)	12.3%	1.6%	89.8%	6.9%	0.9%	0.6%
	Laborers & Helpers (Unskilled)	13.9%	2.1%	88.9%	7.5%	0.4%	0.9%
	All On-Site Construction Occupations	12.7%	1.7%	89.6%	7.1%	0.8%	0.7%
Denver-Aurora-Boulder, CO	Craft Workers (Skilled)	7.0%	29.8%	64.2%	2.7%	1.6%	1.4%
	Laborers & Helpers (Unskilled)	8.3%	39.5%	53.9%	3.4%	1.4%	1.3%
	All On-Site Construction Occupations	7.4%	32.3%	61.5%	2.9%	1.5%	1.4%
Des Moines-Newton-Pella, IA	Craft Workers (Skilled)	9.3%	5.3%	91.5%	1.5%	1.2%	0.4%
	Laborers & Helpers (Unskilled)	13.1%	5.7%	91.3%	1.4%	1.2%	0.5%
	All On-Site Construction Occupations	10.2%	5.4%	91.4%	1.4%	1.2%	0.4%
Detroit-Warren-Flint, MI	Craft Workers (Skilled)	10.2%	4.8%	80.5%	12.5%	1.0%	0.9%
	Laborers & Helpers (Unskilled)	12.3%	6.4%	76.2%	15.1%	0.8%	0.9%
	All On-Site Construction Occupations	10.6%	5.1%	79.6%	13.1%	0.9%	0.9%
Dothan-Enterprise-Ozark, AL	Craft Workers (Skilled)	9.2%	4.8%	66.6%	27.1%	0.3%	1.0%
	Laborers & Helpers (Unskilled)	11.1%	5.8%	58.2%	34.9%	0.4%	0.3%
	All On-Site Construction Occupations	9.7%	5.0%	64.5%	29.1%	0.4%	0.8%
Dover, DE	Craft Workers (Skilled)	7.0%	10.1%	69.2%	19.0%	0.6%	0.7%
	Laborers & Helpers (Unskilled)	10.5%	12.6%	61.8%	23.9%	0.9%	0.6%
	All On-Site Construction Occupations	7.8%	10.7%	67.5%	20.1%	0.7%	0.6%
Duluth, MN-WI	Craft Workers (Skilled)	8.2%	0.6%	95.7%	0.3%	0.3%	3.0%
	Laborers & Helpers (Unskilled)	10.0%	0.9%	93.9%	0.3%	0.0%	4.9%
	All On-Site Construction Occupations	8.5%	0.7%	95.4%	0.3%	0.2%	3.4%
El Paso, TX	Craft Workers (Skilled)	5.6%	71.9%	24.9%	1.6%	0.3%	1.2%
	Laborers & Helpers (Unskilled)	6.2%	80.2%	17.5%	0.7%	0.1%	1.3%
	All On-Site Construction Occupations	5.8%	74.4%	22.6%	1.3%	0.2%	1.2%

Table H.1 -- continued

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Economic Area	Occupation	Women	Hispanics	Whites	Af. Ams.	Asians	AI/NH
Erie, PA	Craft Workers (Skilled)	8.7%	1.9%	94.1%	2.0%	0.3%	1.1%
	Laborers & Helpers (Unskilled)	11.1%	2.7%	92.8%	2.7%	0.3%	1.1%
	All On-Site Construction Occupations	9.2%	2.1%	93.8%	2.1%	0.3%	1.1%
Eugene-Springfield, OR	Craft Workers (Skilled)	7.3%	7.2%	87.5%	0.4%	0.7%	4.1%
	Laborers & Helpers (Unskilled)	9.3%	8.6%	87.7%	0.0%	0.9%	2.8%
	All On-Site Construction Occupations	7.8%	7.5%	87.5%	0.3%	0.8%	3.7%
Evansville, IN-KY	Craft Workers (Skilled)	7.9%	1.3%	95.6%	2.3%	0.3%	0.5%
	Laborers & Helpers (Unskilled)	10.2%	2.8%	93.0%	3.0%	0.6%	0.4%
	All On-Site Construction Occupations	8.4%	1.6%	95.1%	2.5%	0.3%	0.5%
Fargo-Wahpeton, ND-MN	Craft Workers (Skilled)	8.9%	1.8%	91.9%	0.8%	0.4%	5.0%
	Laborers & Helpers (Unskilled)	11.8%	2.0%	90.6%	1.5%	0.2%	5.6%
	All On-Site Construction Occupations	9.6%	1.9%	91.5%	1.0%	0.4%	5.2%
Farmington, NM	Craft Workers (Skilled)	7.9%	19.5%	68.5%	0.3%	0.3%	10.7%
	Laborers & Helpers (Unskilled)	9.4%	28.6%	55.4%	0.0%	0.2%	13.9%
	All On-Site Construction Occupations	8.3%	21.7%	65.4%	0.2%	0.3%	11.5%
Fayetteville-Springdale-Rogers, AR-MO	Craft Workers (Skilled)	8.9%	10.0%	76.9%	1.2%	0.5%	11.0%
	Laborers & Helpers (Unskilled)	11.1%	14.9%	69.1%	2.3%	0.5%	12.8%
	All On-Site Construction Occupations	9.4%	11.1%	75.2%	1.4%	0.5%	11.4%
Flagstaff, AZ	Craft Workers (Skilled)	6.8%	12.5%	74.1%	0.2%	0.7%	12.3%
	Laborers & Helpers (Unskilled)	9.0%	22.0%	61.4%	0.0%	0.6%	15.9%
	All On-Site Construction Occupations	7.4%	14.7%	71.2%	0.1%	0.7%	13.2%
Fort Smith, AR-OK	Craft Workers (Skilled)	9.7%	6.0%	76.3%	3.1%	1.6%	12.5%
	Laborers & Helpers (Unskilled)	9.8%	8.5%	70.3%	4.6%	1.0%	15.4%
	All On-Site Construction Occupations	9.7%	6.7%	74.7%	3.5%	1.5%	13.3%
Fort Wayne-Huntington-Auburn, IN	Craft Workers (Skilled)	12.9%	6.1%	88.8%	3.0%	0.7%	1.3%
	Laborers & Helpers (Unskilled)	13.4%	8.3%	84.8%	4.4%	1.2%	1.3%
	All On-Site Construction Occupations	13.0%	6.6%	87.9%	3.3%	0.8%	1.3%
Fresno-Madera, CA	Craft Workers (Skilled)	8.1%	55.1%	38.0%	1.7%	3.6%	1.4%
	Laborers & Helpers (Unskilled)	7.7%	58.2%	35.5%	2.0%	2.7%	1.3%
	All On-Site Construction Occupations	8.0%	55.9%	37.4%	1.8%	3.3%	1.4%
Gainesville, FL	Craft Workers (Skilled)	5.2%	8.1%	76.8%	12.5%	0.3%	2.2%
	Laborers & Helpers (Unskilled)	4.8%	11.2%	64.7%	21.5%	0.4%	2.2%
	All On-Site Construction Occupations	5.1%	8.8%	74.0%	14.5%	0.3%	2.2%
Grand Forks, ND-MN	Craft Workers (Skilled)	9.4%	2.5%	92.5%	0.8%	0.7%	3.5%
	Laborers & Helpers (Unskilled)	15.9%	1.3%	93.0%	1.6%	0.3%	3.8%
	All On-Site Construction Occupations	10.7%	2.2%	92.6%	1.0%	0.6%	3.6%
Grand Rapids-Muskegon-Holland, MI	Craft Workers (Skilled)	11.9%	7.5%	86.0%	4.3%	1.0%	1.1%
	Laborers & Helpers (Unskilled)	14.2%	9.2%	84.4%	4.7%	0.9%	0.8%
	All On-Site Construction Occupations	12.4%	7.9%	85.7%	4.4%	1.0%	1.0%
Great Falls, MT	Craft Workers (Skilled)	7.8%	2.3%	83.0%	0.5%	0.1%	14.0%
	Laborers & Helpers (Unskilled)	12.1%	0.4%	85.5%	0.4%	0.0%	13.7%
	All On-Site Construction Occupations	9.0%	1.7%	83.7%	0.5%	0.1%	13.9%
Greensboro--Winston-Salem--High Point, NC	Craft Workers (Skilled)	8.9%	12.4%	72.1%	14.0%	0.6%	0.6%
	Laborers & Helpers (Unskilled)	13.2%	15.8%	62.8%	19.6%	0.7%	0.5%
	All On-Site Construction Occupations	9.9%	13.2%	69.9%	15.3%	0.6%	0.6%
Greenville, NC	Craft Workers (Skilled)	8.2%	9.3%	65.4%	23.3%	0.3%	1.3%
	Laborers & Helpers (Unskilled)	10.9%	12.4%	57.8%	28.6%	0.3%	0.8%
	All On-Site Construction Occupations	8.6%	9.8%	64.2%	24.2%	0.3%	1.2%
Greenville-Spartanburg-Anderson, SC	Craft Workers (Skilled)	9.8%	8.5%	73.3%	16.9%	0.6%	0.6%
	Laborers & Helpers (Unskilled)	12.6%	13.5%	63.6%	22.0%	0.7%	0.3%
	All On-Site Construction Occupations	10.5%	9.8%	70.8%	18.2%	0.6%	0.5%
Gulfport-Biloxi-Pascagoula, MS	Craft Workers (Skilled)	8.9%	6.6%	79.0%	13.4%	0.6%	0.5%
	Laborers & Helpers (Unskilled)	12.8%	8.2%	69.2%	20.5%	1.8%	0.3%
	All On-Site Construction Occupations	9.8%	7.0%	76.8%	15.0%	0.9%	0.4%

Table H.1 -- continued

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Economic Area	Occupation	Women	Hispanics	Whites	Af. Ams.	Asians	AI/NH
Harrisburg-Carlisle-Lebanon, PA	Craft Workers (Skilled)	8.4%	3.8%	92.3%	2.7%	0.7%	0.3%
	Laborers & Helpers (Unskilled)	14.3%	4.9%	89.8%	3.7%	1.0%	0.2%
	All On-Site Construction Occupations	9.8%	4.0%	91.8%	2.9%	0.8%	0.3%
Harrisonburg, VA	Craft Workers (Skilled)	8.8%	2.9%	91.2%	4.9%	0.3%	0.6%
	Laborers & Helpers (Unskilled)	14.8%	4.3%	88.0%	5.5%	0.9%	1.1%
	All On-Site Construction Occupations	10.2%	3.2%	90.5%	5.0%	0.4%	0.7%
Hartford-West Hartford-Willimantic, CT	Craft Workers (Skilled)	7.4%	9.5%	82.6%	5.5%	1.4%	0.6%
	Laborers & Helpers (Unskilled)	9.3%	11.8%	78.8%	7.2%	1.0%	0.3%
	All On-Site Construction Occupations	7.8%	9.9%	81.9%	5.8%	1.4%	0.5%
Helena, MT	Craft Workers (Skilled)	8.5%	2.3%	91.3%	0.3%	0.3%	5.7%
	Laborers & Helpers (Unskilled)	12.7%	1.6%	90.2%	0.3%	0.2%	7.6%
	All On-Site Construction Occupations	9.4%	2.2%	91.1%	0.3%	0.3%	6.1%
Honolulu, HI	Craft Workers (Skilled)	5.7%	10.2%	24.2%	2.0%	37.1%	15.5%
	Laborers & Helpers (Unskilled)	7.2%	12.6%	21.9%	1.5%	34.6%	18.7%
	All On-Site Construction Occupations	6.0%	10.7%	23.7%	1.9%	36.6%	16.2%
Houston-Baytown-Huntsville, TX	Craft Workers (Skilled)	5.4%	51.8%	34.5%	10.9%	1.9%	0.6%
	Laborers & Helpers (Unskilled)	6.1%	60.4%	25.1%	12.3%	1.4%	0.4%
	All On-Site Construction Occupations	5.5%	53.9%	32.2%	11.3%	1.8%	0.5%
Huntsville-Decatur, AL	Craft Workers (Skilled)	10.8%	6.0%	82.0%	9.3%	0.4%	2.2%
	Laborers & Helpers (Unskilled)	12.6%	9.9%	75.0%	12.3%	0.1%	2.7%
	All On-Site Construction Occupations	11.2%	6.9%	80.4%	10.0%	0.3%	2.3%
Idaho Falls-Blackfoot, ID	Craft Workers (Skilled)	8.5%	11.1%	86.1%	0.0%	0.3%	2.4%
	Laborers & Helpers (Unskilled)	12.8%	19.2%	77.5%	0.0%	0.2%	3.1%
	All On-Site Construction Occupations	9.6%	13.2%	83.8%	0.0%	0.3%	2.6%
Indianapolis-Anderson-Columbus, IN	Craft Workers (Skilled)	10.7%	5.2%	86.8%	6.4%	0.7%	0.7%
	Laborers & Helpers (Unskilled)	13.0%	7.1%	83.1%	8.0%	0.9%	0.6%
	All On-Site Construction Occupations	11.2%	5.7%	85.9%	6.8%	0.7%	0.7%
Jacksonville, FL	Craft Workers (Skilled)	6.4%	9.2%	71.2%	17.2%	1.3%	0.9%
	Laborers & Helpers (Unskilled)	8.9%	11.8%	63.0%	22.1%	1.5%	1.1%
	All On-Site Construction Occupations	6.9%	9.8%	69.3%	18.3%	1.4%	0.9%
Jackson-Yazoo City, MS	Craft Workers (Skilled)	8.0%	3.0%	58.9%	36.8%	0.4%	0.8%
	Laborers & Helpers (Unskilled)	10.1%	3.9%	49.5%	45.8%	0.4%	0.4%
	All On-Site Construction Occupations	8.5%	3.2%	56.7%	38.9%	0.4%	0.7%
Johnson City-Kingsport-Bristol (Tri-Cities), TN-VA	Craft Workers (Skilled)	8.8%	1.6%	95.8%	1.8%	0.2%	0.6%
	Laborers & Helpers (Unskilled)	9.9%	3.5%	92.8%	2.8%	0.2%	0.6%
	All On-Site Construction Occupations	9.0%	2.0%	95.1%	2.0%	0.2%	0.6%
Jonesboro, AR	Craft Workers (Skilled)	9.0%	2.4%	80.6%	15.3%	0.3%	1.3%
	Laborers & Helpers (Unskilled)	16.6%	4.6%	71.4%	23.1%	0.1%	0.7%
	All On-Site Construction Occupations	10.8%	2.9%	78.5%	17.1%	0.3%	1.2%
Joplin, MO	Craft Workers (Skilled)	10.4%	3.8%	85.5%	1.6%	0.1%	8.8%
	Laborers & Helpers (Unskilled)	11.9%	3.8%	85.2%	3.4%	0.1%	7.4%
	All On-Site Construction Occupations	10.7%	3.8%	85.4%	2.1%	0.1%	8.4%
Kansas City-Overland Park-Kansas City, MO-	Craft Workers (Skilled)	8.5%	8.2%	82.9%	6.4%	0.6%	1.7%
	Laborers & Helpers (Unskilled)	10.5%	11.8%	78.5%	7.5%	0.8%	1.1%
	All On-Site Construction Occupations	9.0%	9.1%	81.8%	6.7%	0.7%	1.6%
Kearney, NE	Craft Workers (Skilled)	9.2%	9.6%	87.6%	0.7%	0.6%	1.5%
	Laborers & Helpers (Unskilled)	17.8%	19.5%	77.8%	0.6%	1.1%	0.9%
	All On-Site Construction Occupations	11.6%	12.4%	84.9%	0.7%	0.7%	1.3%
Kennewick-Richland-Pasco, WA	Craft Workers (Skilled)	8.5%	31.8%	62.7%	1.6%	1.3%	2.6%
	Laborers & Helpers (Unskilled)	9.9%	30.4%	62.3%	1.1%	1.4%	4.7%
	All On-Site Construction Occupations	8.8%	31.5%	62.6%	1.5%	1.3%	3.0%
Killeen-Temple-Fort Hood, TX	Craft Workers (Skilled)	7.3%	25.4%	62.1%	10.2%	0.7%	1.5%
	Laborers & Helpers (Unskilled)	10.8%	32.5%	52.8%	12.6%	1.1%	0.9%
	All On-Site Construction Occupations	8.3%	27.4%	59.4%	10.9%	0.8%	1.4%

Table H.1 -- continued

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Economic Area	Occupation	Women	Hispanics	Whites	Af. Ams.	Asians	AI/NH
Knoxville-Sevierville-La Follette, TN	Craft Workers (Skilled)	8.9%	3.4%	91.7%	3.4%	0.4%	0.8%
	Laborers & Helpers (Unskilled)	11.4%	4.6%	90.9%	3.1%	0.1%	0.6%
	All On-Site Construction Occupations	9.5%	3.7%	91.5%	3.4%	0.3%	0.8%
La Crosse, WI-MN	Craft Workers (Skilled)	10.4%	1.2%	96.3%	0.8%	1.2%	0.3%
	Laborers & Helpers (Unskilled)	13.1%	1.1%	96.0%	1.2%	1.3%	0.3%
	All On-Site Construction Occupations	11.0%	1.2%	96.2%	0.9%	1.2%	0.3%
Lafayette-Acadiana, LA	Craft Workers (Skilled)	5.3%	2.8%	70.7%	23.8%	1.4%	0.7%
	Laborers & Helpers (Unskilled)	6.8%	4.3%	60.3%	31.2%	2.9%	1.0%
	All On-Site Construction Occupations	5.6%	3.1%	68.4%	25.4%	1.8%	0.7%
Lake Charles-Jennings, LA	Craft Workers (Skilled)	5.6%	4.2%	79.5%	14.8%	0.0%	0.8%
	Laborers & Helpers (Unskilled)	10.2%	2.4%	70.7%	25.8%	0.0%	0.8%
	All On-Site Construction Occupations	6.6%	3.8%	77.5%	17.3%	0.0%	0.8%
Las Vegas-Paradise-Pahrump, NV	Craft Workers (Skilled)	6.3%	38.5%	53.5%	3.8%	1.9%	2.0%
	Laborers & Helpers (Unskilled)	8.9%	47.6%	43.8%	5.0%	1.8%	1.4%
	All On-Site Construction Occupations	6.9%	40.7%	51.2%	4.1%	1.8%	1.8%
Lewiston, ID-WA	Craft Workers (Skilled)	9.9%	7.4%	87.3%	0.9%	0.8%	3.5%
	Laborers & Helpers (Unskilled)	11.1%	4.8%	88.2%	1.6%	1.5%	3.6%
	All On-Site Construction Occupations	10.2%	6.7%	87.5%	1.1%	1.0%	3.5%
Lexington-Fayette-Frankfort--Richmond, KY	Craft Workers (Skilled)	8.0%	2.8%	92.3%	4.2%	0.4%	0.3%
	Laborers & Helpers (Unskilled)	9.0%	3.2%	92.8%	3.6%	0.0%	0.4%
	All On-Site Construction Occupations	8.2%	2.9%	92.4%	4.0%	0.3%	0.3%
Lincoln, NE	Craft Workers (Skilled)	8.5%	7.1%	86.9%	1.1%	3.1%	1.6%
	Laborers & Helpers (Unskilled)	10.4%	9.4%	82.8%	1.2%	4.6%	1.7%
	All On-Site Construction Occupations	9.0%	7.7%	85.7%	1.1%	3.5%	1.6%
Little Rock-North Little Rock-Pine Bluff, AR	Craft Workers (Skilled)	9.1%	5.4%	78.3%	14.7%	0.5%	1.1%
	Laborers & Helpers (Unskilled)	11.2%	9.1%	71.5%	17.7%	0.3%	1.4%
	All On-Site Construction Occupations	9.5%	6.1%	76.9%	15.3%	0.4%	1.2%
Los Angeles-Long Beach-Riverside, CA	Craft Workers (Skilled)	7.6%	62.8%	26.9%	3.7%	5.1%	0.9%
	Laborers & Helpers (Unskilled)	7.9%	69.6%	21.0%	4.0%	3.8%	1.0%
	All On-Site Construction Occupations	7.7%	65.0%	25.1%	3.8%	4.7%	1.0%
Louisville-Elizabethtown-Scottsburg, KY-IN	Craft Workers (Skilled)	10.6%	2.9%	89.7%	6.3%	0.5%	0.4%
	Laborers & Helpers (Unskilled)	13.8%	3.9%	86.2%	8.8%	0.4%	0.5%
	All On-Site Construction Occupations	11.4%	3.1%	88.9%	6.9%	0.5%	0.4%
Lubbock-Levelland, TX	Craft Workers (Skilled)	6.3%	45.8%	50.1%	2.4%	0.3%	1.2%
	Laborers & Helpers (Unskilled)	7.5%	47.8%	45.4%	5.8%	0.1%	0.9%
	All On-Site Construction Occupations	6.6%	46.3%	48.9%	3.3%	0.2%	1.1%
Macon-Warner Robins-Fort Valley, GA	Craft Workers (Skilled)	9.1%	5.7%	64.2%	29.1%	0.3%	0.6%
	Laborers & Helpers (Unskilled)	12.1%	7.8%	52.1%	39.4%	0.5%	0.1%
	All On-Site Construction Occupations	9.7%	6.1%	61.6%	31.4%	0.4%	0.5%
Madison-Baraboo, WI	Craft Workers (Skilled)	9.7%	2.6%	94.7%	0.9%	0.7%	1.0%
	Laborers & Helpers (Unskilled)	14.3%	2.9%	93.6%	1.8%	0.4%	1.1%
	All On-Site Construction Occupations	10.9%	2.7%	94.5%	1.1%	0.6%	1.0%
Marinette, WI-MI	Craft Workers (Skilled)	8.7%	1.2%	93.9%	0.4%	0.7%	3.6%
	Laborers & Helpers (Unskilled)	12.8%	0.9%	92.0%	0.8%	1.3%	5.0%
	All On-Site Construction Occupations	9.4%	1.1%	93.6%	0.5%	0.8%	3.9%
Mason City, IA	Craft Workers (Skilled)	12.5%	0.7%	98.4%	0.3%	0.5%	0.0%
	Laborers & Helpers (Unskilled)	21.2%	0.8%	98.9%	0.1%	0.1%	0.1%
	All On-Site Construction Occupations	14.7%	0.7%	98.5%	0.3%	0.4%	0.1%
McAllen-Edinburg-Pharr, TX	Craft Workers (Skilled)	3.3%	94.0%	5.2%	0.3%	0.0%	0.3%
	Laborers & Helpers (Unskilled)	5.6%	95.0%	3.9%	0.2%	0.2%	0.5%
	All On-Site Construction Occupations	4.0%	94.3%	4.8%	0.3%	0.1%	0.4%
Memphis, TN-MS-AR	Craft Workers (Skilled)	11.5%	5.9%	61.7%	30.9%	0.5%	0.7%
	Laborers & Helpers (Unskilled)	16.4%	9.3%	50.3%	39.1%	0.3%	0.5%
	All On-Site Construction Occupations	12.7%	6.7%	59.0%	32.8%	0.5%	0.6%

Table H.1 -- continued

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Economic Area	Occupation	Women	Hispanics	Whites	Af. Ams.	Asians	AI/NH
Miami-Fort Lauderdale-Miami Beach, FL	Craft Workers (Skilled)	5.9%	50.0%	31.9%	16.3%	0.8%	0.4%
	Laborers & Helpers (Unskilled)	7.1%	53.2%	26.3%	18.8%	0.8%	0.3%
	All On-Site Construction Occupations	6.3%	51.0%	30.2%	17.0%	0.8%	0.4%
Midland-Odessa, TX	Craft Workers (Skilled)	4.2%	51.6%	43.9%	2.2%	0.5%	1.7%
	Laborers & Helpers (Unskilled)	5.2%	58.8%	36.7%	2.3%	0.5%	1.6%
	All On-Site Construction Occupations	4.5%	53.7%	41.8%	2.2%	0.5%	1.7%
Milwaukee-Racine- Waukesha, WI	Craft Workers (Skilled)	9.9%	7.9%	83.7%	6.4%	1.0%	0.9%
	Laborers & Helpers (Unskilled)	12.1%	10.3%	79.2%	8.6%	0.7%	1.1%
	All On-Site Construction Occupations	10.4%	8.4%	82.7%	6.8%	0.9%	0.9%
Minneapolis-St. Paul-St. Cloud, MN-WI	Craft Workers (Skilled)	9.6%	3.9%	90.2%	2.3%	2.2%	1.2%
	Laborers & Helpers (Unskilled)	12.0%	5.3%	88.2%	3.0%	1.9%	1.3%
	All On-Site Construction Occupations	10.1%	4.2%	89.7%	2.5%	2.1%	1.3%
Minot, ND	Craft Workers (Skilled)	8.4%	1.0%	89.8%	0.2%	0.1%	8.7%
	Laborers & Helpers (Unskilled)	10.5%	0.8%	87.3%	0.5%	0.0%	11.4%
	All On-Site Construction Occupations	8.9%	1.0%	89.2%	0.3%	0.1%	9.3%
Missoula, MT	Craft Workers (Skilled)	9.2%	1.8%	94.8%	0.1%	0.4%	2.8%
	Laborers & Helpers (Unskilled)	8.0%	0.7%	93.7%	0.0%	1.1%	4.5%
	All On-Site Construction Occupations	8.9%	1.5%	94.6%	0.0%	0.6%	3.2%
Mobile-Daphne- Fairhope, AL	Craft Workers (Skilled)	9.6%	3.0%	65.4%	28.4%	1.2%	1.8%
	Laborers & Helpers (Unskilled)	12.7%	4.6%	54.3%	38.1%	0.8%	2.1%
	All On-Site Construction Occupations	10.3%	3.3%	62.9%	30.6%	1.1%	1.8%
Monroe-Bastrop, LA	Craft Workers (Skilled)	5.2%	3.2%	69.0%	25.7%	0.4%	1.6%
	Laborers & Helpers (Unskilled)	6.4%	2.5%	58.8%	36.8%	0.1%	1.8%
	All On-Site Construction Occupations	5.5%	3.0%	66.2%	28.7%	0.4%	1.7%
Montgomery- Alexander City, AL	Craft Workers (Skilled)	11.0%	3.0%	58.1%	37.5%	0.3%	1.0%
	Laborers & Helpers (Unskilled)	10.6%	4.4%	50.6%	44.1%	0.3%	0.3%
	All On-Site Construction Occupations	10.9%	3.4%	56.2%	39.2%	0.3%	0.8%
Myrtle Beach- Conway- Georgetown, SC	Craft Workers (Skilled)	8.6%	7.9%	65.2%	24.7%	0.3%	1.4%
	Laborers & Helpers (Unskilled)	11.4%	9.6%	57.7%	30.5%	0.4%	1.6%
	All On-Site Construction Occupations	9.3%	8.3%	63.3%	26.2%	0.3%	1.4%
Nashville- Davidson-- Murfreesboro--	Craft Workers (Skilled)	10.4%	8.9%	81.0%	8.1%	0.8%	1.1%
	Laborers & Helpers (Unskilled)	12.7%	11.3%	76.8%	10.2%	0.5%	1.1%
	All On-Site Construction Occupations	11.0%	9.5%	80.0%	8.6%	0.7%	1.1%
New Orleans- Metairie-Bogalusa, LA	Craft Workers (Skilled)	6.0%	9.7%	62.7%	24.6%	1.3%	0.9%
	Laborers & Helpers (Unskilled)	7.9%	12.8%	54.4%	28.5%	1.9%	1.3%
	All On-Site Construction Occupations	6.5%	10.6%	60.4%	25.7%	1.4%	1.0%
New York-Newark- Bridgeport, NY-NJ- CT-PA	Craft Workers (Skilled)	5.7%	28.2%	53.9%	12.5%	3.9%	0.4%
	Laborers & Helpers (Unskilled)	7.0%	36.1%	44.6%	13.6%	4.0%	0.3%
	All On-Site Construction Occupations	6.0%	30.4%	51.3%	12.8%	3.9%	0.4%
Oklahoma City- Shawnee, OK	Craft Workers (Skilled)	7.1%	15.9%	70.3%	4.5%	1.2%	7.6%
	Laborers & Helpers (Unskilled)	8.8%	20.2%	64.9%	5.1%	1.1%	8.2%
	All On-Site Construction Occupations	7.5%	16.8%	69.1%	4.6%	1.2%	7.8%
Omaha-Council Bluffs-Fremont, NE-IA	Craft Workers (Skilled)	7.7%	6.8%	89.2%	1.9%	0.6%	1.1%
	Laborers & Helpers (Unskilled)	11.0%	10.0%	84.2%	3.2%	1.0%	1.1%
	All On-Site Construction Occupations	8.5%	7.5%	88.0%	2.2%	0.7%	1.1%
Orlando-The Villages, FL	Craft Workers (Skilled)	7.3%	25.2%	61.4%	10.8%	1.0%	0.8%
	Laborers & Helpers (Unskilled)	8.5%	29.5%	54.4%	13.1%	1.0%	1.0%
	All On-Site Construction Occupations	7.7%	26.4%	59.5%	11.4%	1.0%	0.8%
Paducah, KY-IL	Craft Workers (Skilled)	8.3%	1.3%	92.7%	5.2%	0.4%	0.3%
	Laborers & Helpers (Unskilled)	8.8%	1.4%	91.8%	6.2%	0.4%	0.0%
	All On-Site Construction Occupations	8.4%	1.3%	92.5%	5.4%	0.4%	0.2%
Panama City-Lynn Haven, FL	Craft Workers (Skilled)	5.9%	4.9%	80.1%	11.2%	0.9%	1.9%
	Laborers & Helpers (Unskilled)	8.9%	4.1%	76.3%	16.3%	0.3%	1.6%
	All On-Site Construction Occupations	6.5%	4.7%	79.3%	12.3%	0.7%	1.8%

Table H.1 -- continued

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Economic Area	Occupation	Women	Hispanics	Whites	Af. Ams.	Asians	AI/NH
Pendleton-Hermiston, OR	Craft Workers (Skilled)	10.9%	16.4%	80.3%	0.5%	0.2%	2.4%
	Laborers & Helpers (Unskilled)	10.1%	20.9%	77.2%	0.0%	0.0%	1.4%
	All On-Site Construction Occupations	10.7%	17.5%	79.5%	0.4%	0.1%	2.2%
Pensacola-Ferry Pass-Brent, FL	Craft Workers (Skilled)	7.3%	5.5%	77.9%	11.9%	2.0%	1.6%
	Laborers & Helpers (Unskilled)	10.2%	10.1%	68.1%	16.0%	1.9%	2.0%
	All On-Site Construction Occupations	8.0%	6.7%	75.5%	12.9%	2.0%	1.7%
Peoria-Canton, IL	Craft Workers (Skilled)	9.2%	2.3%	94.2%	2.4%	0.4%	0.5%
	Laborers & Helpers (Unskilled)	12.3%	4.0%	90.6%	4.6%	0.5%	0.3%
	All On-Site Construction Occupations	10.0%	2.8%	93.3%	3.0%	0.4%	0.5%
Philadelphia-Camden-Vineland, PA-NJ-DE-MD	Craft Workers (Skilled)	6.5%	9.1%	75.0%	12.8%	2.2%	0.4%
	Laborers & Helpers (Unskilled)	8.9%	12.5%	68.0%	16.5%	2.0%	0.4%
	All On-Site Construction Occupations	7.0%	9.9%	73.4%	13.6%	2.2%	0.4%
Phoenix-Mesa-Scottsdale, AZ	Craft Workers (Skilled)	6.2%	48.3%	42.9%	2.2%	1.1%	5.0%
	Laborers & Helpers (Unskilled)	6.6%	57.4%	33.4%	2.3%	0.7%	5.8%
	All On-Site Construction Occupations	6.3%	50.7%	40.4%	2.3%	1.0%	5.2%
Pittsburgh-New Castle, PA	Craft Workers (Skilled)	5.8%	0.5%	94.6%	3.9%	0.3%	0.4%
	Laborers & Helpers (Unskilled)	9.0%	0.5%	94.7%	3.8%	0.5%	0.4%
	All On-Site Construction Occupations	6.5%	0.5%	94.6%	3.8%	0.4%	0.4%
Portland-Lewiston-South Portland, ME	Craft Workers (Skilled)	6.3%	0.5%	96.5%	1.0%	0.4%	1.5%
	Laborers & Helpers (Unskilled)	12.5%	0.4%	95.4%	1.4%	0.7%	2.0%
	All On-Site Construction Occupations	7.3%	0.4%	96.3%	1.0%	0.5%	1.6%
Portland-Vancouver-Beaverton, OR-	Craft Workers (Skilled)	8.3%	16.9%	76.1%	1.9%	2.7%	2.0%
	Laborers & Helpers (Unskilled)	9.9%	21.3%	71.7%	2.6%	2.2%	1.8%
	All On-Site Construction Occupations	8.7%	17.9%	75.1%	2.0%	2.6%	2.0%
Pueblo, CO	Craft Workers (Skilled)	8.0%	33.0%	62.9%	1.9%	0.1%	1.7%
	Laborers & Helpers (Unskilled)	10.0%	43.7%	51.3%	2.5%	0.0%	1.6%
	All On-Site Construction Occupations	8.6%	36.0%	59.6%	2.0%	0.1%	1.7%
Raleigh-Durham-Cary, NC	Craft Workers (Skilled)	8.4%	17.5%	53.3%	24.8%	0.7%	3.2%
	Laborers & Helpers (Unskilled)	9.7%	22.8%	41.9%	30.7%	0.6%	3.7%
	All On-Site Construction Occupations	8.7%	18.7%	50.7%	26.1%	0.7%	3.3%
Rapid City, SD	Craft Workers (Skilled)	6.9%	6.4%	84.2%	1.8%	0.3%	7.0%
	Laborers & Helpers (Unskilled)	11.8%	11.3%	74.9%	0.5%	0.8%	11.5%
	All On-Site Construction Occupations	8.0%	7.5%	82.1%	1.5%	0.4%	7.9%
Redding, CA	Craft Workers (Skilled)	7.8%	16.3%	77.2%	0.6%	1.2%	4.3%
	Laborers & Helpers (Unskilled)	10.8%	17.8%	77.1%	0.3%	0.6%	4.2%
	All On-Site Construction Occupations	8.5%	16.7%	77.2%	0.5%	1.0%	4.3%
Reno-Sparks, NV	Craft Workers (Skilled)	9.0%	22.0%	72.6%	0.7%	1.0%	3.4%
	Laborers & Helpers (Unskilled)	13.9%	27.8%	65.9%	0.6%	1.5%	3.8%
	All On-Site Construction Occupations	10.1%	23.3%	71.1%	0.7%	1.2%	3.5%
Richmond, VA	Craft Workers (Skilled)	6.8%	6.9%	69.0%	22.3%	1.0%	0.4%
	Laborers & Helpers (Unskilled)	9.9%	9.6%	60.5%	27.9%	0.8%	0.7%
	All On-Site Construction Occupations	7.6%	7.6%	67.0%	23.6%	1.0%	0.5%
Roanoke, VA	Craft Workers (Skilled)	8.7%	2.3%	85.4%	11.3%	0.4%	0.3%
	Laborers & Helpers (Unskilled)	11.9%	4.3%	79.3%	15.9%	0.1%	0.3%
	All On-Site Construction Occupations	9.4%	2.7%	84.1%	12.3%	0.4%	0.3%
Rochester-Batavia-Seneca Falls, NY	Craft Workers (Skilled)	8.5%	3.6%	89.6%	4.7%	1.1%	0.9%
	Laborers & Helpers (Unskilled)	10.7%	5.2%	87.5%	5.3%	1.1%	0.9%
	All On-Site Construction Occupations	9.0%	4.0%	89.1%	4.8%	1.1%	0.9%
Sacramento--Arden-Arcade--Truckee, CA-NV	Craft Workers (Skilled)	6.5%	26.1%	62.2%	3.7%	5.1%	2.5%
	Laborers & Helpers (Unskilled)	9.5%	31.3%	55.1%	5.1%	5.4%	2.6%
	All On-Site Construction Occupations	7.3%	27.5%	60.3%	4.0%	5.1%	2.5%
Salina, KS	Craft Workers (Skilled)	6.7%	3.4%	93.1%	2.2%	0.7%	0.5%
	Laborers & Helpers (Unskilled)	11.8%	3.9%	92.5%	2.1%	0.8%	0.7%
	All On-Site Construction Occupations	7.8%	3.5%	93.0%	2.2%	0.8%	0.6%

Table H.1 -- continued

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Economic Area	Occupation	Women	Hispanics	Whites	Af. Ams.	Asians	AI/NH
Salt Lake City- Ogden-Clearfield, UT	Craft Workers (Skilled)	8.0%	19.3%	75.6%	1.0%	1.4%	2.5%
	Laborers & Helpers (Unskilled)	8.3%	27.2%	67.0%	1.8%	1.2%	2.6%
	All On-Site Construction Occupations	8.1%	21.3%	73.4%	1.2%	1.4%	2.6%
San Angelo, TX	Craft Workers (Skilled)	5.0%	44.3%	52.1%	2.7%	0.3%	0.2%
	Laborers & Helpers (Unskilled)	4.9%	44.5%	52.5%	2.6%	0.2%	0.2%
	All On-Site Construction Occupations	5.0%	44.3%	52.2%	2.7%	0.3%	0.2%
San Antonio, TX	Craft Workers (Skilled)	5.8%	64.2%	30.0%	3.7%	1.2%	0.6%
	Laborers & Helpers (Unskilled)	6.2%	70.1%	24.6%	3.5%	0.7%	0.6%
	All On-Site Construction Occupations	5.9%	65.8%	28.6%	3.6%	1.1%	0.6%
San Diego- Carlsbad-San Marcos, CA	Craft Workers (Skilled)	7.5%	44.4%	42.1%	4.2%	7.3%	1.7%
	Laborers & Helpers (Unskilled)	8.0%	52.2%	37.3%	3.9%	4.6%	1.6%
	All On-Site Construction Occupations	7.6%	46.6%	40.7%	4.1%	6.5%	1.7%
San Jose-San Francisco- Oakland, CA	Craft Workers (Skilled)	7.7%	41.6%	41.0%	4.2%	10.7%	1.7%
	Laborers & Helpers (Unskilled)	8.1%	49.3%	35.4%	5.5%	7.1%	2.0%
	All On-Site Construction Occupations	7.8%	43.8%	39.4%	4.6%	9.6%	1.8%
Santa Fe- Espanola, NM	Craft Workers (Skilled)	7.2%	67.2%	27.1%	1.2%	0.1%	4.2%
	Laborers & Helpers (Unskilled)	10.6%	67.7%	25.1%	2.2%	0.3%	4.4%
	All On-Site Construction Occupations	8.4%	67.4%	26.4%	1.6%	0.2%	4.3%
Sarasota- Bradenton-Venice, FL	Craft Workers (Skilled)	6.5%	34.4%	58.6%	5.9%	0.6%	0.3%
	Laborers & Helpers (Unskilled)	9.3%	42.3%	51.0%	5.3%	0.6%	0.2%
	All On-Site Construction Occupations	7.3%	36.5%	56.6%	5.8%	0.6%	0.3%
Savannah- Hinesville-Fort Stewart, GA	Craft Workers (Skilled)	8.1%	9.4%	57.4%	31.4%	0.8%	0.5%
	Laborers & Helpers (Unskilled)	10.7%	14.1%	49.4%	35.1%	0.6%	0.1%
	All On-Site Construction Occupations	8.8%	10.6%	55.4%	32.3%	0.7%	0.4%
Scotts Bluff, NE	Craft Workers (Skilled)	7.5%	7.7%	90.7%	0.4%	0.1%	1.2%
	Laborers & Helpers (Unskilled)	14.1%	12.5%	84.9%	0.0%	0.0%	2.5%
	All On-Site Construction Occupations	8.8%	8.7%	89.5%	0.3%	0.0%	1.4%
Scranton--Wilkes- Barre, PA	Craft Workers (Skilled)	6.5%	3.0%	95.3%	0.7%	0.6%	0.2%
	Laborers & Helpers (Unskilled)	11.4%	3.6%	93.9%	1.5%	0.4%	0.1%
	All On-Site Construction Occupations	7.5%	3.2%	95.0%	0.9%	0.5%	0.2%
Seattle-Tacoma- Olympia, WA	Craft Workers (Skilled)	8.3%	12.0%	75.0%	3.7%	5.8%	3.1%
	Laborers & Helpers (Unskilled)	11.3%	15.9%	67.7%	4.8%	6.3%	4.7%
	All On-Site Construction Occupations	8.9%	12.7%	73.6%	3.9%	5.9%	3.4%
Shreveport- Bossier City- Minden, LA	Craft Workers (Skilled)	6.3%	3.0%	63.8%	31.2%	0.2%	1.5%
	Laborers & Helpers (Unskilled)	6.9%	3.9%	54.4%	40.0%	0.1%	1.6%
	All On-Site Construction Occupations	6.4%	3.1%	62.0%	32.9%	0.2%	1.5%
Sioux City- Vermillion, IA-NE- SD	Craft Workers (Skilled)	6.7%	7.4%	89.8%	0.9%	0.4%	1.3%
	Laborers & Helpers (Unskilled)	11.1%	12.7%	83.1%	0.9%	0.3%	3.0%
	All On-Site Construction Occupations	7.7%	8.7%	88.2%	0.9%	0.4%	1.7%
Sioux Falls, SD	Craft Workers (Skilled)	9.2%	3.8%	92.5%	0.2%	0.4%	2.9%
	Laborers & Helpers (Unskilled)	13.0%	6.7%	85.9%	0.9%	0.5%	6.1%
	All On-Site Construction Occupations	10.2%	4.6%	90.8%	0.4%	0.4%	3.7%
South Bend- Mishawaka, IN-MI	Craft Workers (Skilled)	12.4%	8.5%	86.5%	3.3%	0.4%	1.0%
	Laborers & Helpers (Unskilled)	14.6%	10.4%	84.2%	3.4%	0.4%	1.3%
	All On-Site Construction Occupations	13.0%	8.9%	86.0%	3.3%	0.4%	1.0%
Spokane, WA	Craft Workers (Skilled)	8.2%	8.1%	86.5%	0.9%	0.9%	3.3%
	Laborers & Helpers (Unskilled)	11.4%	8.5%	84.1%	1.5%	1.6%	4.1%
	All On-Site Construction Occupations	8.9%	8.2%	86.0%	1.1%	1.1%	3.5%
Springfield, IL	Craft Workers (Skilled)	8.2%	0.9%	95.5%	2.9%	0.1%	0.5%
	Laborers & Helpers (Unskilled)	8.9%	1.1%	93.7%	4.8%	0.0%	0.4%
	All On-Site Construction Occupations	8.4%	0.9%	95.1%	3.4%	0.1%	0.5%
Springfield, MO	Craft Workers (Skilled)	8.6%	2.7%	93.8%	0.6%	0.2%	2.6%
	Laborers & Helpers (Unskilled)	10.5%	4.2%	90.9%	0.5%	0.3%	3.9%
	All On-Site Construction Occupations	9.1%	3.1%	93.0%	0.6%	0.3%	3.0%

Table H.1 -- continued

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Economic Area	Occupation	Women	Hispanics	Whites	Af. Ams.	Asians	AI/NH
St. Louis-St. Charles-Farmington, MO-IL	Craft Workers (Skilled)	8.0%	2.0%	87.8%	8.8%	0.6%	0.7%
	Laborers & Helpers (Unskilled)	10.0%	2.1%	85.5%	10.9%	0.6%	0.8%
	All On-Site Construction Occupations	8.5%	2.1%	87.2%	9.3%	0.6%	0.7%
State College, PA	Craft Workers (Skilled)	8.3%	0.6%	98.1%	0.9%	0.1%	0.2%
	Laborers & Helpers (Unskilled)	14.2%	1.0%	98.2%	0.5%	0.0%	0.1%
	All On-Site Construction Occupations	9.6%	0.7%	98.1%	0.8%	0.1%	0.1%
Syracuse-Auburn, NY	Craft Workers (Skilled)	7.1%	2.1%	93.7%	2.2%	0.8%	1.0%
	Laborers & Helpers (Unskilled)	8.6%	1.3%	92.1%	3.8%	1.1%	1.6%
	All On-Site Construction Occupations	7.5%	1.9%	93.3%	2.6%	0.9%	1.2%
Tallahassee, FL	Craft Workers (Skilled)	6.4%	8.3%	63.7%	26.5%	0.6%	0.9%
	Laborers & Helpers (Unskilled)	10.1%	8.4%	55.9%	34.0%	0.6%	1.1%
	All On-Site Construction Occupations	7.4%	8.3%	61.5%	28.7%	0.6%	0.9%
Tampa-St. Petersburg-Clearwater, FL	Craft Workers (Skilled)	7.4%	22.3%	65.6%	9.2%	1.7%	0.9%
	Laborers & Helpers (Unskilled)	8.2%	28.0%	58.7%	11.1%	1.1%	0.8%
	All On-Site Construction Occupations	7.6%	23.8%	63.8%	9.7%	1.5%	0.8%
Texarkana, TX-Texarkana, AR	Craft Workers (Skilled)	9.1%	5.4%	78.8%	9.8%	0.5%	5.4%
	Laborers & Helpers (Unskilled)	13.0%	10.1%	70.2%	11.8%	0.4%	7.3%
	All On-Site Construction Occupations	10.0%	6.6%	76.7%	10.3%	0.5%	5.9%
Toledo-Fremont, OH	Craft Workers (Skilled)	11.6%	4.3%	89.2%	5.4%	0.6%	0.5%
	Laborers & Helpers (Unskilled)	15.6%	4.7%	87.0%	7.5%	0.4%	0.4%
	All On-Site Construction Occupations	12.4%	4.4%	88.7%	5.9%	0.6%	0.4%
Topeka, KS	Craft Workers (Skilled)	8.1%	4.9%	91.5%	2.2%	0.3%	1.1%
	Laborers & Helpers (Unskilled)	15.0%	5.8%	89.6%	3.6%	0.2%	0.8%
	All On-Site Construction Occupations	9.5%	5.1%	91.1%	2.5%	0.3%	1.0%
Traverse City, MI	Craft Workers (Skilled)	9.7%	4.2%	93.5%	0.8%	0.1%	1.3%
	Laborers & Helpers (Unskilled)	12.8%	3.4%	94.9%	0.5%	0.0%	1.2%
	All On-Site Construction Occupations	10.6%	4.0%	93.9%	0.7%	0.1%	1.3%
Tucson, AZ	Craft Workers (Skilled)	7.7%	48.8%	43.2%	1.7%	1.6%	4.4%
	Laborers & Helpers (Unskilled)	8.3%	56.5%	35.8%	0.8%	0.6%	5.8%
	All On-Site Construction Occupations	7.9%	50.7%	41.5%	1.5%	1.3%	4.7%
Tulsa-Bartlesville, OK	Craft Workers (Skilled)	7.6%	9.5%	71.1%	3.7%	1.0%	14.3%
	Laborers & Helpers (Unskilled)	9.1%	14.7%	61.9%	6.0%	1.3%	16.1%
	All On-Site Construction Occupations	7.9%	10.7%	69.1%	4.2%	1.1%	14.7%
Tupelo, MS	Craft Workers (Skilled)	12.7%	2.6%	70.5%	26.1%	0.3%	0.5%
	Laborers & Helpers (Unskilled)	14.2%	3.9%	64.0%	31.3%	0.1%	0.6%
	All On-Site Construction Occupations	13.1%	2.9%	69.0%	27.3%	0.2%	0.5%
Twin Falls, ID	Craft Workers (Skilled)	7.7%	22.2%	75.7%	0.0%	0.7%	1.4%
	Laborers & Helpers (Unskilled)	12.0%	19.8%	74.7%	0.0%	0.0%	5.5%
	All On-Site Construction Occupations	8.2%	22.0%	75.6%	0.0%	0.6%	1.8%
Virginia Beach-Norfolk-Newport News, VA-NC	Craft Workers (Skilled)	7.5%	4.9%	60.9%	31.5%	1.6%	0.9%
	Laborers & Helpers (Unskilled)	10.6%	5.9%	54.3%	37.3%	1.4%	0.7%
	All On-Site Construction Occupations	8.2%	5.1%	59.5%	32.7%	1.5%	0.8%
Washington-Baltimore-Northern Virginia, DC-MD-VA-WV	Craft Workers (Skilled)	6.6%	18.0%	59.3%	18.8%	2.8%	0.6%
	Laborers & Helpers (Unskilled)	9.2%	25.0%	51.5%	20.5%	1.9%	0.6%
	All On-Site Construction Occupations	7.2%	19.6%	57.4%	19.2%	2.6%	0.6%
Waterloo-Cedar Falls, IA	Craft Workers (Skilled)	10.6%	1.0%	96.8%	1.8%	0.3%	0.1%
	Laborers & Helpers (Unskilled)	15.9%	1.5%	93.8%	4.5%	0.1%	0.1%
	All On-Site Construction Occupations	12.0%	1.1%	96.0%	2.5%	0.3%	0.1%
Wausau-Merrill, WI	Craft Workers (Skilled)	9.8%	0.8%	95.6%	0.3%	0.9%	2.3%
	Laborers & Helpers (Unskilled)	14.2%	0.9%	96.0%	0.1%	0.9%	2.0%
	All On-Site Construction Occupations	10.8%	0.8%	95.7%	0.3%	0.9%	2.2%
Wenatchee, WA	Craft Workers (Skilled)	6.5%	21.1%	74.5%	0.0%	0.5%	3.7%
	Laborers & Helpers (Unskilled)	7.9%	28.6%	66.7%	0.1%	0.1%	4.4%
	All On-Site Construction Occupations	6.8%	22.9%	72.7%	0.0%	0.4%	3.8%

Table H.1 -- continued

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Economic Area	Occupation	Women	Hispanics	Whites	Af. Ams.	Asians	AI/NH
Wichita Falls, TX	Craft Workers (Skilled)	7.0%	32.8%	63.4%	2.0%	0.5%	1.0%
	Laborers & Helpers (Unskilled)	7.2%	39.3%	55.0%	4.2%	0.4%	0.9%
	All On-Site Construction Occupations	7.1%	34.5%	61.2%	2.6%	0.5%	1.0%
Wichita-Winfield, KS	Craft Workers (Skilled)	10.0%	13.5%	77.8%	3.5%	2.3%	2.7%
	Laborers & Helpers (Unskilled)	13.0%	17.5%	73.3%	4.5%	2.3%	2.2%
	All On-Site Construction Occupations	10.6%	14.4%	76.8%	3.8%	2.3%	2.6%

APPENDIX TABLE H.2

Appendix Table H.2 is 180 pages long and for that reason is not included in printed copies of this report. Table 8.2 in Chapter 8 provides a sample page from the table. The complete table is available in EXCEL format on a separate CD.