

SECTION II.

Analysis of MBE/WBE Availability

BBC collected and analyzed data on the relative availability of minority- and women-owned businesses for two purposes: (a) setting a base figure for the overall annual DBE goal, and (b) developing a benchmark for utilization in the disparity analyses. The disparity analysis is one tool to determine whether or how much of the overall annual DBE goal can be achieved through race- and gender-neutral measures.

The study team performed a statistical analysis of Caltrans and local agency contracts to determine the percentage of work expected to go to minority- and women-owned firms. The data required for this statistical analysis came from telephone interviews with firms potentially available for

transportation construction and engineering work in California, and BBC's compilations of data on more than 10,000 Caltrans and Local Assistance prime contracts and subcontracts.

The balance of Section II describes availability analysis methods, results and implications for Caltrans' implementation of the Federal DBE Program. Appendix C (Availability Survey) provides additional information on the survey effort.

Figure II-1. **Definitions of MBE/WBEs,** **DBEs and potential DBEs**

Minority- and women-owned firms. Firms that reported they were owned and controlled by minorities or women (or identified as such in relevant databases) are counted as MBEs and WBEs in the utilization and availability analysis. A "minority" follows the definition in the Federal DBE Program, as outlined in Appendix A of this report.

Certified Disadvantaged Business Enterprises (DBE). BBC counted a firm as a certified DBE if it was identified as certified in the California Uniform Certification Program (CUCP) database in the year that a contract was awarded.

Potential DBEs. To formulate the overall annual DBE goal, BBC excluded high-revenue minority- and women-owned firms. Firms that appeared that they could be potentially certified as DBEs based on ownership and revenue were counted in the overall goal. Note that this excluded some high-revenue firms that were DBE certified in 2006. Construction-related firms with annual revenue of less than \$10 million and engineering-related firms with annual revenue of less than \$5 million were counted as potential DBEs. This is below the revenue limit of \$19,750,000 because of lower Small Business Administration size limits for certain construction and engineering disciplines, the revenue size categories in the availability survey, and to account for the fact that firms above these lower revenue limits are more likely to exceed the net worth limit of \$750,000. BBC's approach results in somewhat lower estimates of potential DBE availability than the methodology applied in studies reviewed by the courts in Illinois and Minnesota.

Measuring MBE/WBE Availability

Definitions. The availability analysis considers three definitions of minority- and women-owned firms:

- Firms that are owned and controlled by minorities or women, whether or not they are certified as disadvantaged business enterprises ("MBE and WBEs");
- Businesses that have been certified as disadvantaged business enterprises ("DBEs"), which means that they are below certain revenue and personal net worth limits; and
- Minority- and women-owned firms that are certified or potentially could be certified as DBEs ("potential DBEs").

BBC's analysis starts by examining relative availability of MBEs and WBEs as defined above (and discussed in Figure II-1). Because implementation of the Federal DBE Program requires tracking of DBE utilization (and may extend certain program benefits

solely to firms certified as DBEs), BBC also reports certain utilization data based on DBE status of the firm. Minority- and women-owned firms not certified as DBEs are not counted in these DBE utilization statistics.

Finally, Caltrans must set an overall annual goal for DBE utilization, but many firms that could be certified as DBEs are not currently certified (as discussed in Figure II-2).

Consistent with availability analysis in states such as Illinois and Minnesota that have been reviewed by the courts, BBC analyzes the base figure for the overall DBE goal based primarily on relative availability of minority- and women-owned firms that are potential DBEs, not just those that are currently certified. To accomplish this, BBC excludes the highest-revenue MBEs and WBEs from the base figure analysis.

Figure II-2.
Anecdotal information
regarding DBE certification

BBC's telephone interviews with a sample of non-certified MBEs and WBEs found that most of these firms have not sought certification. There were only a few firm owners interviewed who reported they were familiar with certification requirements and believed that their firm would not meet those requirements. Some interviewees who were not DBE certified or chose not to recertify cited the following reasons:

- Did not know DBE certification program existed;
- Belief that there was no need to become certified or that it would not help the firm get work;
- Found the process too cumbersome; and
- Perception that a DBE certification would act as a barrier to receiving work.

Appendix I contains more information on these perceptions.

Why disparity analysis for MBE/WBEs and not DBEs? Comparing utilization and availability of minority- and women-owned firms (by race/ethnicity/gender) is the way a researcher should analyze whether or not there are disparities affecting minority- and women-owned firms. The potential that race or gender discrimination affects utilization of firms should be studied using information on minority- and women-owned firms in general. Firms may be discriminated against based on the race and gender of the business owner regardless of whether they have applied for DBE certification.

Further, the disparity analysis should include the most successful minority- and women-owned firms in the statistics for MBE/WBE utilization and availability. A disparity analysis for just DBEs excludes these highly successful firms from the statistics. DBE utilization and availability would be based on data for "economically disadvantaged" minority- and women-owned firms compared with results for all firms. One might find disparities for any group of firms for which membership is limited to low-revenue firms.¹

Finally, white male-owned firms can be certified as DBEs (even though few seek such certification). Disparity analysis based just on certified DBEs is not purely an analysis of disparities by race and gender.

Caltrans currently only tracks information concerning certified DBEs, as this is what is needed for reports to USDOT. For purposes of this study, BBC also required information on all minority- and

¹ An analogous situation concerns analysis of possible wage discrimination. A disparity analysis that would compare wages of minority employees to wages of all employees should include both low- and high-wage minorities in the statistics for minority employees. If the analysis removed high-wage minorities from the statistics for minorities, any comparison of wages between minorities and non-minorities would likely show disparities in wage levels. A disparity analysis that only includes certified DBEs in the statistics for minority-owned firms suffers from the same flaw.

women-owned firms whether or not they are currently certified or could be certified (were below revenue and net worth limits), as explained in Figure II-1.

The BBC study team implemented a strategy for measuring MBE/WBE availability that was consistent with the USDOT's and federal courts' guidance for availability studies.

Survey of California businesses potentially related to transportation construction and engineering. The study team contacted business establishments in California that were listed in the Dun & Bradstreet (D&B) directory for primary lines of work potentially related to transportation construction and engineering. BBC selected California as the relevant geographic market area because 95 percent of the dollars going to prime contractors or subcontractors on Caltrans transportation construction and engineering projects from 2002 through 2006 went to firms with locations in California.

The study team first purchased all listings of business establishments in California that D&B listed under the Standard Industrial Classification (SIC) codes BBC determined to be most pertinent to Caltrans transportation construction and engineering contracts (49,276 business listings). The study team attempted to contact each of these potential businesses. The telephone interviews were conducted in the fall of 2006 by Customer Research International (CRI), a telephone survey research firm in Texas that has substantial expertise conducting these types of surveys. (BBC completed the survey effort by faxing and e-mailing surveys to firms that had requested receiving hard copy versions of the survey.)

- These telephone interviews began by confirming that CRI had reached the correct business.
- CRI interviewers then asked the firm owner or manager, "First, I want to confirm that your firm does work related to transportation construction, maintenance or design. Is this correct?" Interviewees were told that this included trying to sell this work, not just successfully performing this work. Interviews continued with firms responding "yes" to this question.
- CRI interviewers also confirmed or refined the D&B information concerning each firm's primary line of work.
- The survey collected information on the geographic scope of that work within the state, specific interest in Caltrans work, and past bidding and performance of transportation construction and engineering contracts for Caltrans, local governments and the private sector.
- Firms were asked to identify the largest contract or subcontract performed or bid on in the past five years.
- Interviewers asked firms whether they were qualified and interested in work for Caltrans and/or local governments. Separate questions asked about qualifications and interest in this work as a prime contractor and as a subcontractor.

**Figure II-3.
Strengths of a
"custom census" approach**

The study team determined that a telephone survey of firms in California was a preferable approach to analyzing availability than relying on: (a) firm counts from the DBE directory and U.S. Census data; (b) pre-qualification lists, which are not a part of standard Caltrans practice; or (c) a bidders list, which Caltrans has not yet implemented successfully.

Federal courts have reviewed and upheld "custom census" approaches to availability that begin with D&B data. The study team's methodology for analyzing MBE/WBE availability took the previous custom census approach reviewed by the courts as a starting point and added several layers of additional screening when determining firms available for transportation construction and engineering work.

- The survey asked firms whether they were owned and controlled by minorities and/or women.
- Other firm characteristics were collected as well (see Appendix C).

Some of the reasons for using this approach to measuring relative MBE/WBE availability are summarized in Figure II-3 on the previous page.

Survey performance. The availability analysis conducted for Caltrans represents the largest survey to date of potentially available firms conducted in any state or local government disparity study known to the study team. The study team attempted to complete surveys with all firms in California whose primary lines of business were within transportation construction and engineering-related SIC codes. (There was no “sampling” from the sample frame in preparing the list of firms to be surveyed.)

The study team obtained completed surveys from 18,675 business establishments, or about 47 percent of the business establishments with valid phone listings, which is relatively high for this type of research. Of the 18,675 firms successfully interviewed, 3,398 were for-profit firms reporting that they:

- Perform work related to transportation construction, maintenance or design (in the lines of business pertinent to this study and after combining multiple responses for firms with more than one office);
- Are qualified and interested in performing transportation-related work for Caltrans and/or local governments in the future, as a prime contractor and/or subcontractor (or supplier or trucker);
- Have attempted to obtain this work in the past (in the public or private sector); and
- Indicated the regions of the state in which they can perform work.

Appendix C provides additional information about survey performance.

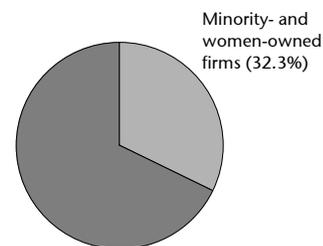
Results of the Availability Analysis

As noted above, 3,398 firms in the transportation construction and engineering industry reported qualifications and interest in future Caltrans and/or local government transportation work and had performed or bid on such work in the past. Of these firms, 32 percent reported that they were minority- or women-owned (see Figure II-4 on the following page). As this percentage is based on a simple “headcount” of firms, it is just a starting point for the availability analysis.

Figure II-4.
MBE/WBEs as a share of firms available for transportation contracting work

Note:
 Unweighted.

Source:
 BBC Research and Consulting from 2006 Availability Survey.



**Figure II-5.
Coding of firms owned by
minority women**

Firms owned by minority women present a challenge in coding for purposes of both the availability analysis and the utilization analysis. BBC considered four options for coding and analysis of firms owned by minority women:

- a. coding these firms as both minority- and women-owned;
- b. creating a unique group of minority female-owned firms;
- c. grouping minority female owned firms with all women-owned firms; and
- d. grouping minority female-owned firms with the relevant race/ethnic group.

BBC chose not to code the firms as both women-owned and minority-owned to avoid potential double-counting when reporting total MBE/WBE utilization and availability. Dividing each race/ethnic group into firms owned by men versus women (e.g., African American male-owned firms, African American female-owned firms, etc.) was also unworkable for purposes of the disparity analysis. Some minority groups had utilization and availability so low even when combining men and women that further dis segregation made it more difficult to interpret results.

After rejecting the first two options, BBC then considered whether to group minority female-owned firms with the relevant minority group or with all women-owned firms. BBC chose to group African American women-owned firms with all African American-owned firms, etc. “WBE” refers to white women-owned firms. Evidence of discrimination against white women-owned firms should be considered evidence of discrimination against women of any race or gender. This definition of WBEs gives Caltrans information to answer questions that often arise pertaining to utilization of white women-owned firms. There have been questions of whether disproportionate share of work goes to this set of firms.

Firms available by location. Relative MBE/WBE availability does not vary considerably between districts. This is because firms located in one district often work across a number of districts.

Firms available by sector and work role. BBC also examined MBE/WBE availability by sector and work role and by discipline. (Note that statistics for WBEs refers to white women-owned firms, as discussed in Figure II-5.)

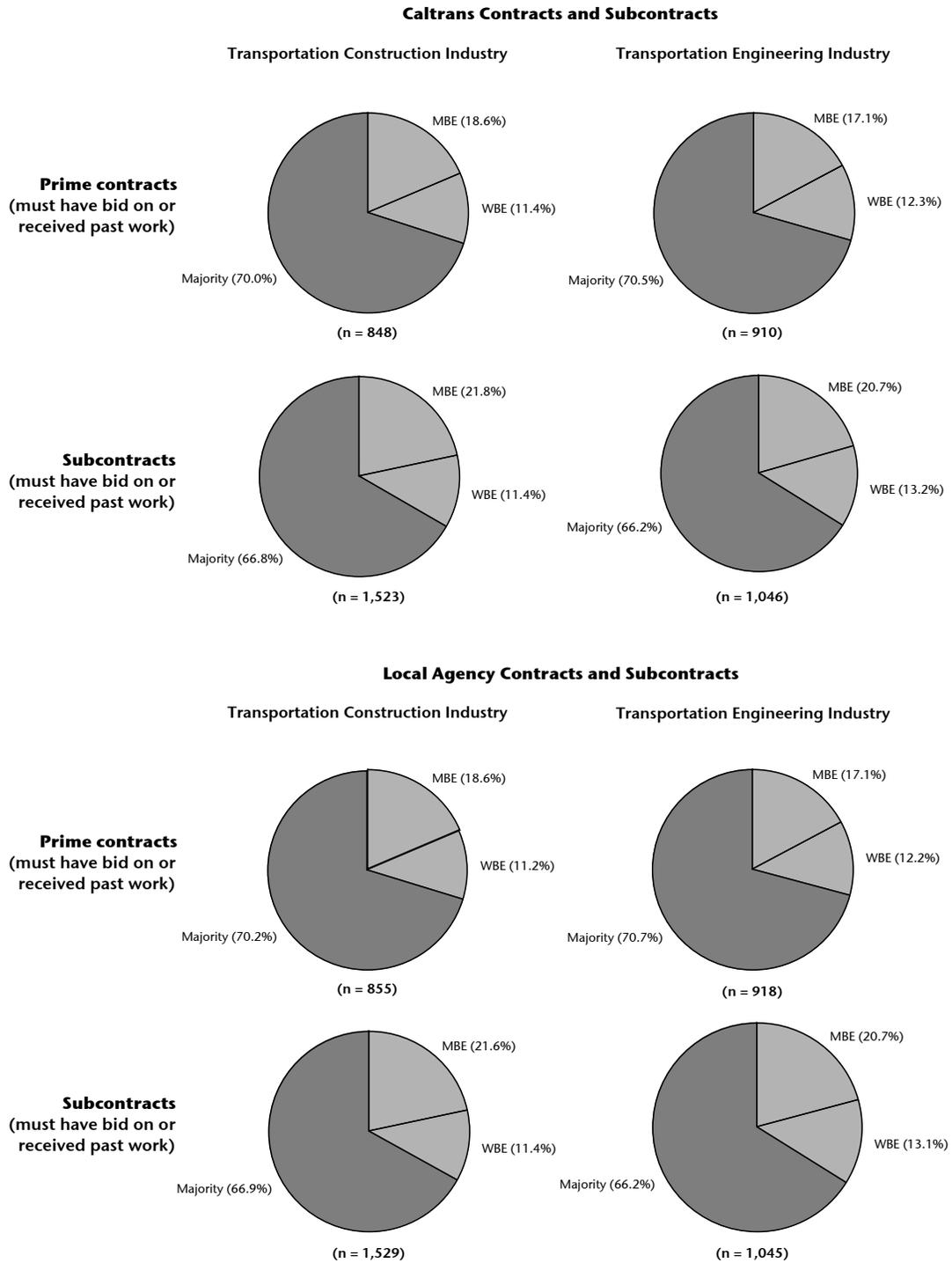
Figure II-6 on the following page shows the percentage of all firms available within these sub-categories that are minority- or women-owned. (All of the results reported in Figure II-6 are based on headcounts of firms prior to any weighting.) Results show that minority- and women-owned firms comprise a larger share of total firms available for Caltrans subcontracting work than for prime contracts. Among transportation construction industry firms reporting qualifications and interest in future Caltrans transportation work as a prime (and had bid or received work as a prime on past transportation work in the public or private sectors), 30 percent are MBEs or WBEs. MBEs and WBEs are 33 percent of transportation construction industry firms reporting past work as well as qualifications and interest in future Caltrans work as a subcontractor or supplier.

Among engineering-related firms that had bid or received work as a prime in the past, MBEs and WBEs comprise 29 percent of firms qualified and interested in future Caltrans work as a prime consultant. Among transportation engineering

industry firms with past subconsultant experience and qualifications and interested in future Caltrans work as a subconsultant, 34 percent are MBEs or WBEs.

The study team also examined firms reporting qualifications and interest in local government transportation work (and had bid or submitted price quotes on past transportation work). Because most firms that reported qualifications and interest in local government also indicated qualifications and interest in Caltrans work, there are no material differences in results for these segments of the market.

**Figure II-6.
MBEs/WBEs as a percentage of transportation construction and engineering industry
firms available for Caltrans and local government**

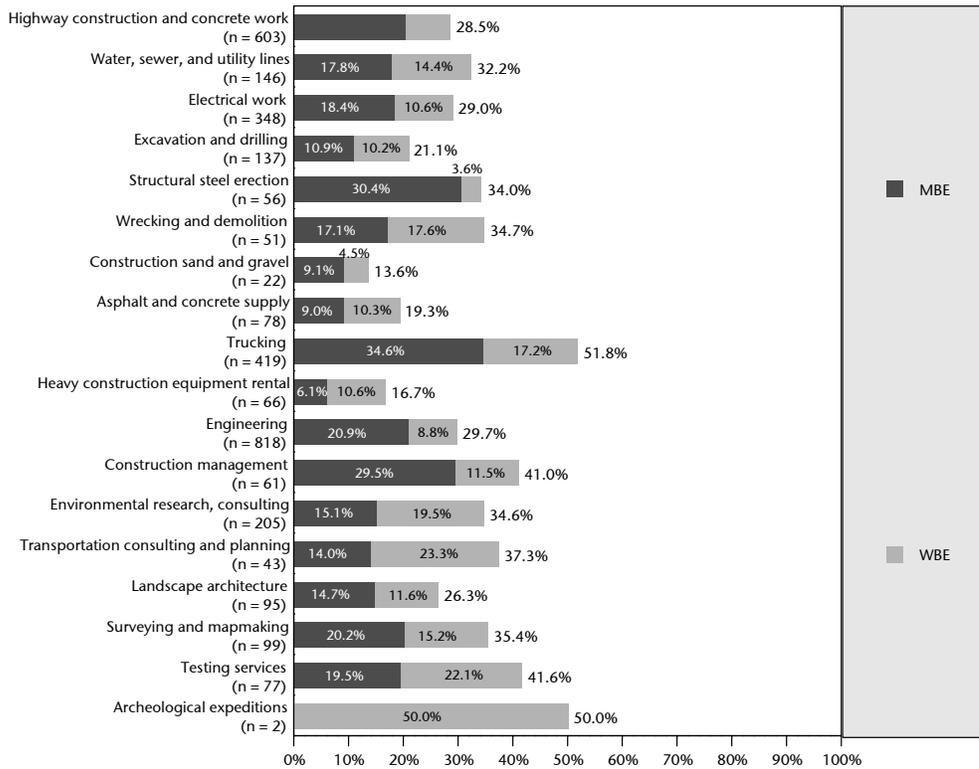


Note: WBE is white woman-owned firms.

Source: BBC Research and Consulting from 2006 Availability Survey.

Firms available by discipline. BBC grouped different types of work involved in Caltrans construction and engineering contracts into 18 disciplines shown in Figure II-7. For example, 28.5 percent of highway construction and concrete work firms are minority- or woman-owned.

Figure II-7.
MBE/WBEs as a percentage of transportation construction and engineering industry firms available for Caltrans and local government transportation work, by discipline



Source: BBC Research & Consulting from 2006 Availability Survey.

Firms by race/ethnicity/gender. Figure II-8 reports number of MBE/WBE firms by group from the availability analysis. Most of the available MBE/WBE businesses are Hispanic American-owned companies or white women-owned firms.

Figure II-8.
MBE/WBEs as a percentage of transportation construction and engineering industry firms available for Caltrans and local government transportation work, by race, ethnicity and gender

	Percent available n = 3,326
African American-owned	3.3%
Asian-Pacific American-owned	4.1
Subcontinent Asian American-owned	1.6
Hispanic American-owned	10.2
Native American-owned	1.7
Total MBE	20.6%
WBE (white women-owned)	11.8
Total MBE/WBE	32.3%

Note: Numbers may not add to total because of rounding.

Source: BBC Research and Consulting from 2006 Availability Survey.

Dollar-weighted MBE/WBE Availability

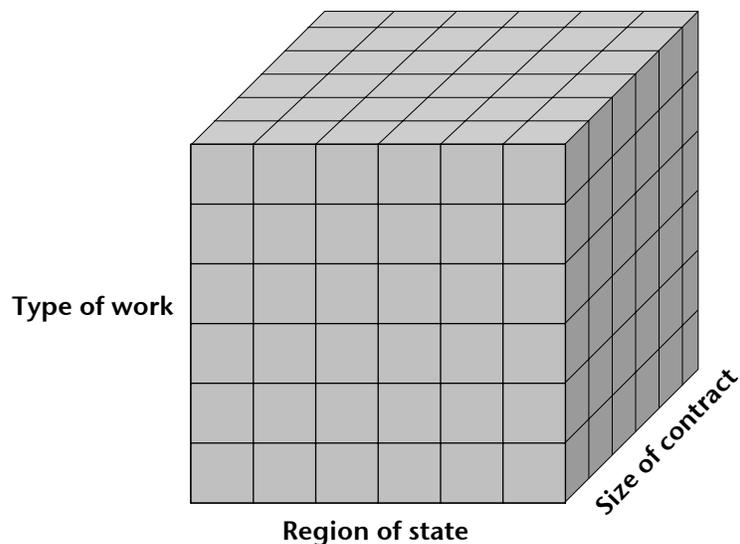
BBC conducted a statistical analysis that examined thousands of prime contracts and subcontracts for Caltrans, local government and SR 125 projects from 2002 through 2006. For each contract element, BBC estimated the number of minority- and woman-owned firms and the total number of firms surveyed that were available for that work based on:

- Specialization of work;
- Prime contract versus subcontract role;
- Location of work;
- Size of contract or subcontract element;
- Contract date; and
- Caltrans versus local agency project.

As described in the following pages, BBC then weighted the relative MBE/WBE availability for each contract element by the dollars for that element. Appendix D provides additional information on this process.

Matrix of relative MBE/WBE availability estimates. Figure II-9 shows a matrix of the database developed through this availability analysis. The study team separately tracks available firms for each cell of this matrix. Relative MBE/WBE availability within a cell is determined by dividing the number of MBEs and WBEs in that cell by the total number of firms in the cell.

Figure II-9.
Matrix for the MBE/WBE
availability analysis



If ABC Company is qualified and interested in performing electrical work as a subcontractor on Caltrans contracts in the San Diego area and performs only small subcontracts, it is shown as an available firm for only that type and size of work as a subcontractor for that geographic area. If a company is qualified and interested in working as both a prime contractor and a subcontractor, and operates across a broad geographic area, then the firm may count as an available business in many different cells of the matrix. The relative MBE/WBE availability for each cell of the matrix is given by the number of MBEs and WBEs in that cell divided by the total number of firms in the cell.

Specialization of work. The USDOT suggests considering the availability of firms based on their ability to perform specific types of work. The example USDOT gives in Tips for Goals Setting in the Disadvantaged Business Enterprise (DBE) Program, which is cited in the *Northern Contracting* court decision², is as follows: If 90 percent of an agency's contracting dollars is spent on heavy construction and 10 percent on trucking, the agency would calculate the percentage of heavy construction firms that are MBEs or WBEs and the percentage of trucking firms that are MBEs or WBEs, and weight the first figure by 90 percent and the second figure by 10 percent when calculating overall MBE/WBE availability.³

Qualifications and interest in prime contractor versus subcontractor work. Although not a requirement in the Federal DBE Program (and not done by the Illinois Department of Transportation in the information reviewed by the Seventh Circuit in *Northern Contracting*⁴), BBC had information on whether firms reported qualifications and interest in working as a *prime contractor* and as a *subcontractor*. In BBC's statistical model, only firms qualified and interested in prime contracts are counted as available for prime contracts. Firms reporting qualifications and interest in subcontracts are counted as available for these contract components. Many firms reported qualifications and interest in both contract roles, and are counted as available when considering both prime contracts and subcontracts.

Location of work. BBC considered the specific regions within California in which firms work in the statistical model. For example, firms that report they could work in the San Francisco Bay Area, but not other regions of the state, are only considered available for work in that geographic area (Caltrans District 4 contracts and work with local agencies located within District 4). Firms operating throughout the state are considered available for work in all regions.

BBC examined work in 12 different regions that correspond to individual Caltrans districts. The effect of this geographic weighting is that firms working throughout the state figure more prominently in the availability calculation than firms working in just one part of the state. The weighting process is described in more detail later in this section.

Size of contract or subcontract element. In counting available firms, BBC also considered whether a firm had previous work experience on a project of equivalent size (in dollars) to the specified contract or subcontract element. To be counted as available for subcontract elements, a firm must have been awarded or bid on a past contract or subcontract of similar or greater size to that contract element. For prime contract elements, a firm must have been awarded or bid on a past contract or subcontract of similar or greater size to the entire contract amount.

Contract date. Similarly, to be counted as available for a contract element (both prime contract and subcontract elements), a firm must report an establishment date during or prior to the year in which that prime contract began. Firms that could not recall or did not report an establishment date were presumed to have been founded prior to the study period.

² 473 F.3d at 723.

³ Tips for Goals Setting in the Disadvantaged Business Enterprise (DBE) Program, <http://osdbu.dot.gov/?TabId=133>.

⁴ 473 F.3d at 723.

Caltrans versus local agency projects. The study team developed separate availability matrices for firms qualified and interested in Caltrans work and firms qualified and interested in local government transportation work. If a firm reported qualifications and interest in both Caltrans and local government work, it was included in both matrices. The study team separately examined firms qualified and interested in prime contract work (or both prime/sub work) from firms that reported themselves to be qualified and interested in subcontract, supply or trucking work (which also includes some potential prime contractors).

Weighting of individual availability estimates. The final step of the availability analysis is to combine the MBE/WBE availability figures for multiple cells to develop aggregate availability figures across many different types of contracts across regions in the state. In general terms, the study team weights the MBE/WBE availability in a cell by the relative dollars of work in that cell and then sums the weighted availability data to determine an aggregate figure. BBC performed this analysis for each of the prime contract and subcontract elements examined in the study, and then combined results across thousands of contract elements on a dollar-weighted basis. Appendix D (Procedures for Estimating MBE/WBE Availability) explains the collection and analysis of Caltrans contract data necessary to perform this dollar weighting.

Results of the statistical analysis of MBE/WBE availability. BBC's analysis indicates that MBEs and WBEs would receive 17.6 percent of prime contract and subcontract dollars for federally-funded transportation construction and engineering contracts. This means that, after considering type of work, contract role, location and size of work involved in federally-funded projects and the types, contract roles, locations and contract sizes for work performed by available firms, 17.6 percent of dollars on federally-funded contracts would go to minority- and women-owned firms (MBE/WBEs) if available MBE/WBEs received the same amount of work as similarly-situated majority-owned firms available for such work.

Base Figure for Overall Annual DBE Goal

The 17.6 dollar-weighted availability statistic pertains to all minority- and women-owned firms. Many minority- and women-owned firms are not currently DBE certified, and some of the largest MBE/WBEs might not meet the federal eligibility requirements for DBE certification.

BBC identified construction-related firms in the availability analysis that reported 2005 gross revenue of more than \$10 million and engineering-related firms with 2005 gross revenue of more than \$5 million (these size categories from the Availability Survey most closely matched U.S. Small Business Administration size thresholds for these disciplines and also account for the fact that firms above these revenue limits are more likely to exceed the net worth limit of \$750,000 than firms below these revenue limits). Removing these firms reduced the availability statistic by about 4 percentage points to a revised base figure of 13.5 percent. This percent statistic represents utilization expected for firms that are potentially DBEs.⁵

Caltrans should consider the 13.5 percent availability statistic when developing a base figure for its overall annual goal for DBE participation.

⁵ Note that some of the firms removed when calculating the base figure were still DBE-certified in 2006.