Final Report

June 29, 2007

Availability and Disparity Study

California Department of Transportation

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Prepared for

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SECTION ES.
Executive Summary

The California Department of Transportation (Caltrans) must implement the Federal Disadvantaged Business Enterprise (DBE) Program in order to receive U.S. Department of Transportation funds (49 CFR Part 26). Recent legal decisions and guidance from USDOT have led Caltrans to reexamine how it implements the Program.

In 2005, the Ninth Circuit Court of Appeals in *Western States Paving v. Washington State DOT* held that the Federal DBE Program enacted by Congress was constitutional but ruled that Washington State DOT's implementation of the Program was unconstitutional. The court held that state and local governments are responsible for determining whether or not there is discrimination in the local transportation contracting industry, and for developing narrowly tailored measures if a need exists, in order to comply with the Federal DBE Program.

This court decision and federal regulations affect Caltrans' implementation of the Federal DBE Program in California. Caltrans must set an overall annual goal for DBE participation in Caltrans' federally-funded contracts and examine whether or not the annual DBE goal can be attained solely through neutral measures or whether race- or gender-based measures are needed. If it chooses to implement race- and gender-conscious measures, such as DBE contract goals, Caltrans must determine the share of the overall DBE goal that will be met through race- and gender-based measures and the specific race, ethnic and gender groups that will be eligible for these elements.

Availability and Disparity Study

Caltrans retained BBC Research & Consulting (BBC) to conduct an Availability and Disparity Study to assist Caltrans in its implementation of the Federal DBE Program. BBC examined the transportation construction and engineering industry in California and related contracts awarded by Caltrans or with funds administered by Caltrans. BBC examined more than 10,000 construction and engineering contracts and subcontracts from 2002 through 2006 for both Caltrans and local agencies. To examine relative availability of minority- and women-owned firms (MBE/WBEs) for this work, more than 18,000 California business establishments were interviewed. The study included in-depth interviews with nearly 100 firm owners and trade association representatives and testimony from public hearings held across the state.

Overall Annual DBE Goal

Caltrans must develop an overall goal for DBE participation whether or not it implements race- or gender-conscious measures to achieve that goal. Its current overall DBE goal is 10.5 percent. The Federal DBE Program requires a "base figure analysis" and consideration of any "step 2" adjustments in deriving an overall annual goal for DBE participation in federally-funded contracts.

Analysis of MBE/WBE availability. About one-third of firms surveyed in the California transportation contracting industry were owned by minorities or women. In the availability analysis, BBC examined type, contract role, location and size of work involved in federally-funded projects

and the relative availability of minority-, women- and majority-owned firms to perform that work. BBC determined that 17.6 percent of dollars on federally-funded contracts would be expected to go to minority- and women-owned firms (MBE/WBEs) based on these factors.

The 17.6 percent figure refers to availability of all minority- and women-owned firms, not just firms that appear to meet the federal guidelines for disadvantaged business enterprises (49 CFR Sections 26.65 and 26.67). After accounting for minority- and women-owned firms that might be too large to meet certification requirements, the availability analysis indicates a figure of 13.5 percent DBE utilization for the base figure.

Caltrans should consider 13.5 percent DBE participation as a base figure for its overall DBE goal.

Marketplace conditions and adjustments to the overall DBE goal. Caltrans might consider adjustments to its overall DBE goal through a "step 2" process outlined in the federal regulations.

There are reasons that Caltrans might consider downward adjustments to the base figure. For example, it will be difficult for Caltrans to encourage the many non-DBE-certified firms to apply for certification (the 13.5 percent figure for overall DBE utilization is predicated on non-certified firms seeking DBE certification).

There are also reasons that Caltrans might consider upward adjustments to the base figure. Information on the California marketplace indicates barriers to entry for minorities and women into the California construction and engineering industries, low rates of business ownership for certain groups working in the industries, lower business earnings for minority- and women-owned firms and other barriers, such as access to capital.

Whether or not the Annual Goal can be Achieved through Neutral Means

The Federal DBE Program requires Caltrans to assess the percentage of its overall annual DBE goal that can be achieved through neutral means, and if necessary, the percentage to be achieved through race- and gender-conscious measures. Much of the disparity study focused on information concerning participation of minority- and women-owned firms in transportation contracts with and without DBE contract goals.

Evidence of disparities when Caltrans implements an all-neutral program. BBC compared utilization and availability of minority- and women-owned firms for both state-funded and federally-funded transportation construction and engineering contracts.[1]

State-funded contracts. Caltrans operates a solely neutral program for state-funded transportation construction and engineering contracts. BBC determined that 19.3 percent of contract dollars for state-funded contracts from 2002 through 2006 would be expected to go to minority- and women-owned firms. Over this time period, 11.4 percent of state-funded contract dollars went to minority- and women-owned firms, far short of the 19.3 percent benchmark for these contracts.

[1] BBC included non-DBE-certified firms as minority- and women-owned in the disparity analysis to accurately assess whether or not there were differences in contracting outcomes for specific race/ethnic/gender groups.

The disparity index for state-funded contracts is 59 when "parity" is an index of 100.[2] A disparity index of 59 means that MBE/WBE utilization on state-funded contracts reached only 59 percent of what would be expected based on relative MBE/WBE availability for these contracts. An index below 80 has been deemed by some courts to constitute a "substantial disparity."

Effectiveness of the DBE contract goals program. Utilization of minority- and women-owned firms on federally-funded contracts from 2002 through April 2006 (with DBE contract goals) was higher than utilization of MBE/WBEs on state-funded contracts. As shown in Figure ES-1, the disparity index for MBE/WBE utilization on federally-funded contracts through April 2006 was 83, higher than the 59 index found for state-funded contracts. Even with DBE contract goals, however, MBE/WBE utilization did not reach "parity." MBE/WBE utilization was 14.7 percent, lower than the 17.6 percent expected based on MBE/WBE availability for these contracts. A number of business owners reported that some prime contractors abused the past good faith efforts process related to Caltrans' DBE subcontracting goals program.

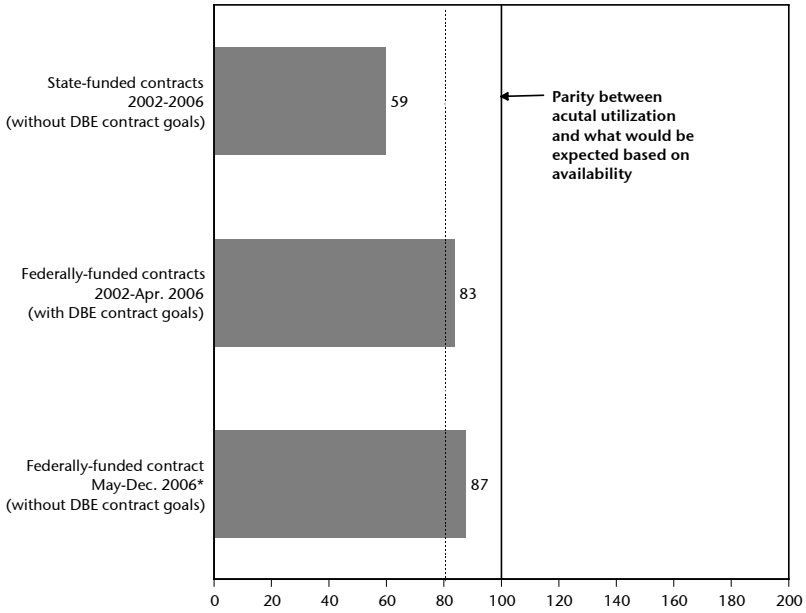
Figure ES-1. Disparity indices for MBE/WBE utilization as prime contractors and subcontractors on Caltrans and local agency transportation construction and engineering contracts

Note:

* Note that only 192 prime contracts and subcontracts were examined in this time period.

Source:

BBC Research and Consulting, 2007.



Federally-funded contracts after May 1, 2006. Caltrans discontinued DBE contract goals on May 1, 2006. Based on the limited number of federally-funded prime contracts and subcontracts for May through December 2006 (only 192), overall MBE/WBE utilization showed little change following adoption of an all race- and gender- neutral program. Overall MBE/WBE utilization for federally-funded contracts was 13.4 percent for May through December 2006. The disparity index for MBE/WBE utilization on federally-funded contracts was 87 for the May through December 2006 period, not a substantial disparity.[3]

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[2] The index of 59 is calculated by dividing 11.4 percent actual utilization by the 19.3 percent benchmark for MBE/WBE utilization for these contracts.

[3] Even though actual MBE/WBE utilization was slightly lower, the disparity index was closer to 100 for May-December 2006 contracts than for 2002-April 2006 federally-funded contracts because the benchmark for MBE/WBE utilization for May-December 2006 contracts, 15.5 percent, was also lower than calculated for 2002-April 2006 contracts.

These utilization and availability statistics pertain to all MBE/WBEs whether or not they were DBE-certified. Only examining utilization of certified firms, DBE participation on federally-funded contracts was 9.0 percent from 2002 through April 2006 and dropped to 4.9 percent for May through December 2006. It is too early to tell whether or not overall MBE/WBE utilization will also decline for federally-funded contracts without DBE project goals.

Other disparity analysis. BBC conducted disparity analysis by specific types of contracts by race/ethnicity/gender ownership of firms. Disparities between utilization and availability are most severe for African American-, Asian-Pacific American- and Native American-owned firms. Based on the Ninth Circuit decision in *Western States Paving v. WSDOT*, if Caltrans chooses to implement any race- or gender-conscious remedies, it should review the evidence for each minority group and for women to determine the specific groups eligible for certain remedies.

Qualitative information. Qualitative information included reports by some minority and female business owners that they had been treated differently because of their race or gender. Business owners also identified disadvantages related to the size and age of their firms.

Firm owners recommended changes to Caltrans contracting practices and other assistance that would further open contracting opportunities to small firms including minority- and women-owned firms. For example, contract sizes and bonding requirements for Caltrans construction work often preclude small firms that bid as primes in the private sector from pursuing Caltrans prime contracts. It was also reported that Caltrans favors large engineering firms with substantial Caltrans experience for its engineering work. Firms owners complained that they could not win Caltrans work as prime consultants if they were not allowed to establish a track record with Caltrans.

Caltrans implementation of neutral programs. The Federal DBE Program requires Caltrans to meet the maximum feasible portion of its overall goal by using race-neutral means of facilitating DBE participation (49 CFR Section 26.51). Results of BBC's review include the following:

1. Caltrans has implemented some of the types of neutral remedies suggested in the Federal DBE Program but not others.
2. Some neutral remedies are in place in some districts or regions of the state but not others.
3. Many of the barriers reported by minority- and women-owned firms call for neutral responses such as:
    - Smaller contracts;
    - Better outreach and communication;
    - Additional technical assistance to small businesses and DBEs;
    - Redesigning contractor and consultant selection practices to provide more opportunities for small businesses seeking construction and engineering prime contracts; and
    - Surety bonding programs and other assistance to small businesses and DBEs.

4. Caltrans' past implementation of the Federal DBE Program did not bring utilization of minority- and women-owned firms on federally-funded contracts to the level expected based on relative availability of MBE/WBEs for this work, and was not effective in removing barriers to prime contract opportunities.

5. Additional actions such as developing a bidders list and improved data collection, tracking and reporting are necessary to be able to fully measure success and effectiveness of neutral measures in creating opportunities for minority- and women-owned firms.

Caltrans should consider results of the disparity analysis, marketplace information, qualitative information and analysis of remedies in determining whether any portion of the overall annual goal for the next fiscal year should be achieved through race- or gender-conscious means.

Measures to Implement the Program

In the 2002 through April 2006 study period, Caltrans' DBE race- and gender-conscious program did not fully address disparities between utilization and availability of minority- and women-owned firms on federally-funded contracts. Strong new measures are needed, especially programs to assist development of minority- and women-owned businesses and to open both prime contract and subcontract opportunities to smaller businesses. Caltrans should do more to remove barriers to the utilization of emerging and more developed MBEs and WBEs.

Business owners, trade association representatives and others recommended specific contracting improvements and assistance efforts. Because of its size and opportunities for innovation at the district level, Caltrans can evaluate "best practices" in certain districts and expand them across the organization. Other actions may require state legislation as well as coordination with other state agencies, local governments and private sector partners. These initiatives will require additional resources. Caltrans must continue to work as a partner with USDOT in these efforts.

Caltrans needs additional metrics to track success beyond those suggested in the Federal DBE Program, including careful tracking of MBE/WBE participation (not just DBE utilization) in both federally-funded and state-funded contracts. Caltrans must refine its data collection systems in collaboration with local agencies, and devote additional resources to data collection efforts. These steps are critical for Caltrans to ensure that it is not an active or passive participant in race or gender discrimination against minority- and women-owned firms.

SECTION I.
Introduction

This report provides information to assist Caltrans in determining how it will implement the Federal Disadvantaged Business Enterprise (DBE) Program.

Study Scope

This Availability and Disparity Study examines the transportation construction and engineering industry in California and related contracts awarded by Caltrans or with funds administered by Caltrans. More than 600 municipalities, counties and regional agencies receive federal and state transportation funding through the Caltrans Local Assistance Program. Larger public transportation agencies such as the Bay Area Rapid Transit Authority (BART) receive funds directly from the federal government and therefore are not examined in this study.

The Study focuses on FHWA-and state-funded contracts. Caltrans did not include FAA-assisted contracts in this study and data concerning FTA-funded contracts were limited. The study team examined contracts in each Caltrans district. (Figure I-1 on the following page identifies Caltrans districts and regions.) Analysis includes firms receiving prime contracts and subcontracts as well as suppliers and truckers. Appendix A (Definition of Terms) explains key terms used in this report.

Federal DBE Program

Caltrans has been implementing some version of a DBE program for federally-funded contracts for nearly 25 years. After enactment of the Transportation Equity Act for the 21st Century (TEA-21) in 1998, the U.S. Department of Transportation (USDOT) established a new Federal DBE Program.

Program elements. The elements of the Program are set forth in 49 CFR Part 26. Race- and gender-conscious measures such as DBE contract goals may be used if necessary, but are not required in a state's implementation of the Federal DBE Program. Until May 1, 2006, Caltrans had used DBE contract goals for federally-funded contracts. In response to new guidance from the courts and from USDOT, Caltrans discontinued use of DBE goals on its contracts as of May 1, 2006 and prohibited local agencies from using DBE goals on federally-funded contracts administered by Caltrans. Caltrans has implemented an all race- and gender-neutral Program since May 1, 2006.

Race/ethnic/gender groups. Disadvantaged business enterprises (DBEs) are defined in the Federal DBE Program (49 CFR Section 26.5). A DBE is a small business owned and controlled by one or more individuals who are socially and economically disadvantaged. The Federal DBE Program specifies the race, ethnic and gender groups that can be presumed to be disadvantaged as well as definitions of when other firms may be socially and economically disadvantaged (explained in Appendix A). These groups are:

- Black Americans (or "African Americans" in this study);
- Hispanic Americans;
- Native Americans;

- Asian-Pacific Americans;
- Subcontinent Asian Americans; and
- Women of any race or ethnicity.

There is a gross revenue limit (not more than $19,570,000 and lower limits for certain lines of business) and a personal net worth limit ($750,000, not including equity in the business and in personal residence) that firms and firm owners must fall below to be able to be certified as a DBE (49 CFR Subpart D). In this study:

- "DBEs" refers to disadvantaged business enterprises according to the federal definitions in 49 CFR Part 26 that have been certified as such.
- "MBEs" and "WBEs" refer to firms owned and controlled by minorities or women, according to the race/ethnicity definitions listed above, whether or not they are certified.
- "Potential certified DBEs" refers to existing minority- and women-owned firms that are or could be certified as DBEs given BBC's information about the size of these firms.

Figure I-1.
Caltrans districts and regions

Legal Requirements for Caltrans Implementation of the Federal DBE Program

The new Federal DBE Program that the federal government developed in 1998 responded to the 1995 U.S. Supreme Court decision in *Adarand Constructors, Inc. v. Pena*.[1] The Court held that a federal program utilizing a racial classification is only constitutional if it serves a "compelling interest" and is "narrowly tailored" to achieve that objective. "Narrow tailoring" has a number of components, which are discussed in Appendix B.

Difference between implementing a federal program and a state or local program. In *Adarand*, the U.S. Supreme Court extended the same standard for review of federal programs that the Court had applied in 1989 to state and local governments in *City of Richmond v. J.A. Croson*.[2] After the *Croson* decision, many state and local minority- and women-owned business enterprise programs (non-federal programs) were held to be unconstitutional by the courts. The state and local programs found to be unconstitutional included a State of California construction subcontracting program for minority- and women-owned businesses on state-funded contracts.

Proposition 209, passed by California voters in 1996, also precludes the State from implementing race- and gender-conscious programs related to non-federally-funded contracts. As it provides for continued implementation of federally-required programs, Proposition 209 does not apply to Caltrans' implementation of the Federal DBE Program.

Appendix B (Legal Environment for Caltrans DBE Program) summarizes certain key federal court decisions affecting race- and gender-conscious programs implemented by public agencies.

Requirements for implementing the Federal DBE Program. As a recipient of USDOT funds, Caltrans is required to implement the Federal DBE Program, and to narrowly tailor its implementation given factors affecting the California transportation construction and engineering marketplace. The current Federal DBE Program provides regulations that state and local governments must follow. Caltrans must:

- Set an overall annual goal for DBE participation in Caltrans' federally-funded contracts;
- Examine whether or not the annual DBE goal can be attained solely through neutral measures or whether race- or gender-based measures are needed;
- Choose the measures it will apply in an attempt to meet the annual DBE goal; and
- Identify the specific race, ethnic and gender groups that will be eligible for any race- or gender-conscious measures such as contract goals.

Overall annual DBE goal. Even though the Federal DBE Program outlined in 49 CFR Part 26 includes an overall 10 percent aspirational goal for DBE participation across the nation, state and local governments receiving USDOT funds must set an annual DBE goal specific to conditions in their relevant marketplace. The Federal DBE Program requires an agency such as Caltrans to set an annual DBE goal whether or not its program utilizes race- or gender-conscious measures such as DBE contract goals.

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[1] 515 U.S. 200 (1995).

[2] 488 U.S. 469 (1989).

Measures required to attempt to meet the goal. The Federal DBE Program requires state and local governments to assess how much of the annual DBE goal can be met through race- and gender-neutral efforts and what percentage, if any, should be met through race- and gender-based efforts such as DBE contract goals. The state or local government must then select specific measures it will use in implementing the Program.

The 2005 Ninth Circuit decision in *Western States Paving Co. v. Washington State DOT* sets requirements that Caltrans must follow in implementing the Federal DBE Program.[3] In this decision, the court held that state and local governments are responsible for determining whether or not there is discrimination in the local transportation contracting industry, and for developing narrowly tailored measures if a need exists, in order to comply with the Federal DBE Program. The court found that sufficient evidence of discrimination exists nationwide to hold that the Federal DBE Program was constitutional. The court also held that narrow tailoring of the program depends on each state or local government evaluating conditions within its own contracting markets.

Accordingly, the USDOT has advised state and local agencies that any use of race- or gender-conscious remedies as part of its DBE program must be based on evidence the recipient has concerning discrimination affecting the local transportation contracting industry[4]:

- The state or local agency determines whether or not there is evidence of discrimination in its transportation contracting industry.
- The USDOT recommends the use of disparity studies to examine whether or not there is evidence of discrimination, and how remedies might be narrowly tailored.
- The USDOT suggests consideration of both statistical and anecdotal evidence. "Disparity analysis," or comparisons of DBE utilization with the relative availability of DBEs to perform the work, is an important part of the statistical information.
- Evidence must be considered for individual race, ethnic and gender groups.

This Study provides information on whether or not there is evidence of discrimination and the need for specific program elements.

Organization of the Report

BBC begins by providing information on availability of minority- and women-owned firms in the transportation contracting industry (Section II). Section II concludes with a suggested "base figure" for Caltrans' goal for DBE participation for the next fiscal year.

Caltrans can consider "step 2" adjustments to the base figure. BBC analyzed a number of factors, some indicating a downward adjustment in the base figure and some suggesting an upward adjustment. Section III presents this information.

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[3] *Western States Paving Co. v. Washington State DOT*, 407 F.3d 983 (9th Cir. 2005)

[4] Questions and Answers Concerning Response to *Western States Paving Company v. Washington State Department of Transportation* [hereinafter DOT Guidance], available at http://www.fhwa.dot.gov/civilrights/dbe_memo_a5.htm. (January 2006).

Caltrans must decide how much of its overall annual DBE goal can be met through neutral means and how much through race-conscious measures. Section IV compares past utilization of minority- and women-owned firms with DBE contract goals and utilization under an all race-neutral program.

BBC explores possible explanations for any overall disparities in the utilization of minority- and women-owned firms. Combining qualitative and quantitative information, BBC separately examines MBE/WBE opportunities as subcontractors on transportation construction projects (Section V) and as prime contractors on these projects (Section VI). Sections VII and VIII examine similar information for transportation engineering subcontracts and prime contracts. Section IX summarizes BBC's analysis of possible remedies as well as other actions Caltrans should take to successfully implement the Federal DBE Program. Study results are summarized in Section X.

Note that a number of appendices provide supporting information for the Final Report. Caltrans should review the detailed discussion of study methodology and results presented in the appendices as it considers future implementation of the Federal DBE Program.

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.

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.

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.

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:

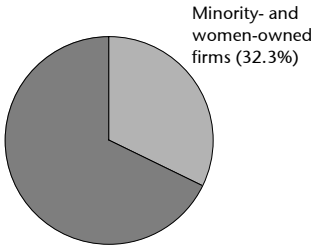
- Perform work related to transportation construction, maintenance or design (in the lines of business pertinent to this study and after combining multiple responses for firms with more than one office);
- Are qualified and interested in performing transportation-related work for Caltrans and/or local 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 disseggregation 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.

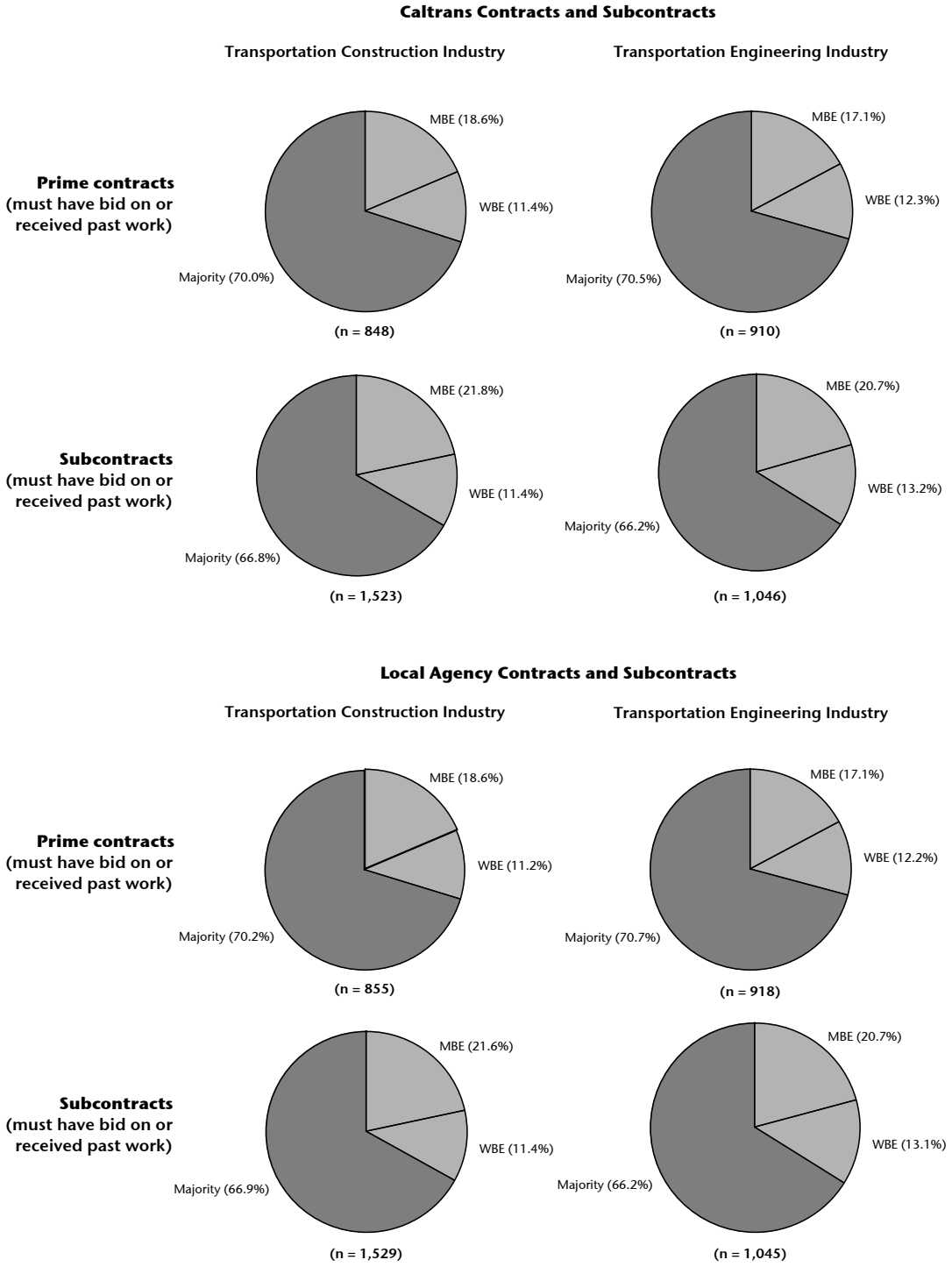
Firms available by sector and work role. BBC also examined MBE/WBE availability by sector and work role and by discipline. (Note that statistics for WBEs refers to white women-owned firms, as discussed in Figure II-5.)

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

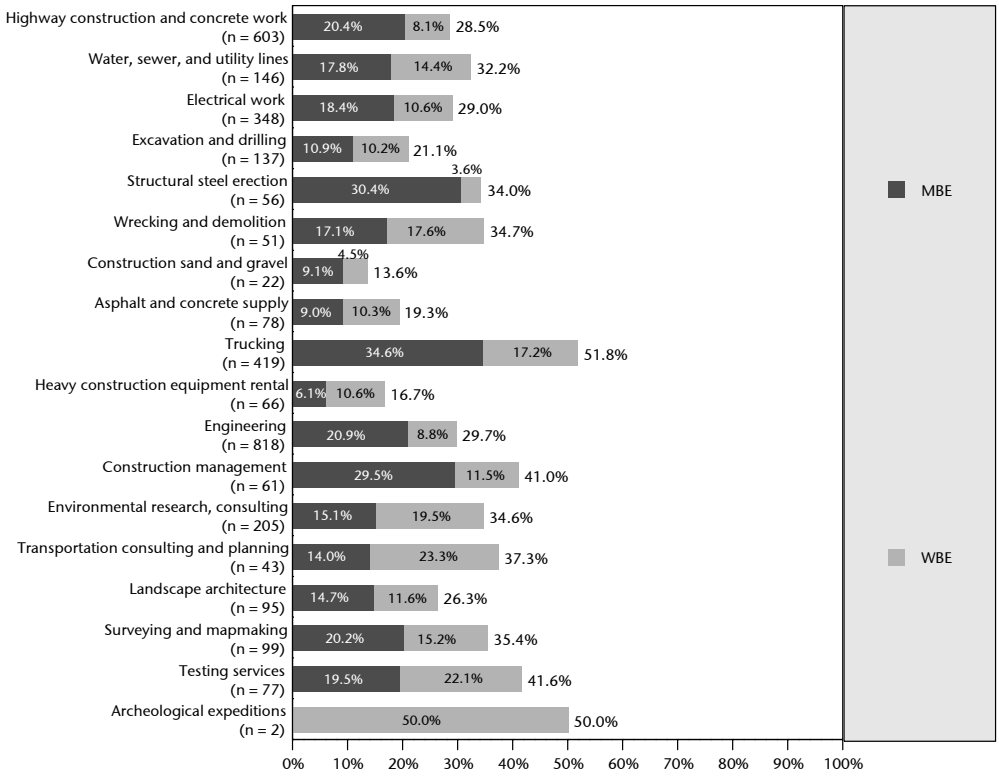


Note: WBE is white woman-owned firms.

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

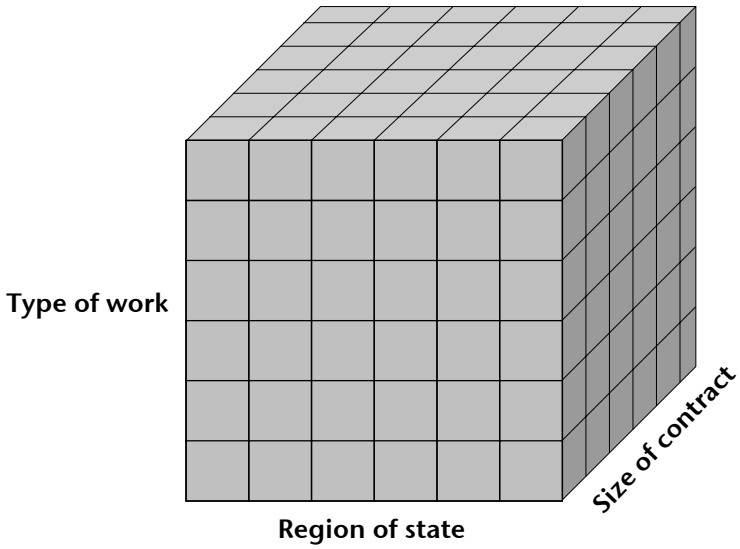
BBC conducted a statistical analysis that examined thousands of prime contracts and subcontracts for Caltrans, local government and SR 125 projects from 2002 through 2006. For each contract element, BBC estimated the number of minority- and woman-owned firms and the total number of firms surveyed that 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 decision[2], 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.

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[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.

SECTION III.
Marketplace Conditions and Adjustments to the Overall DBE Goal

Section III presents information on the "base figure" for Caltrans' overall DBE goal. Caltrans could consider any adjustments in its base figure through the "step 2" process described in 49 CFR Section 26.45. BBC reviewed relevant types of information for a step 2 adjustment that are outlined in the Federal DBE Program, including:

- Current capacity of DBEs to perform work, as measured by the volume of work DBEs have performed in recent years;
- Data on employment, self-employment, education, training and union apprenticeship programs;
- Information on the ability of DBEs to get financing, bonding and insurance; and
- Other relevant data.

Because BBC's base figure analysis includes minority- and women-owned firms that are not currently DBE certified, BBC considered this factor as well.

Factors that Suggest a Downward Adjustment to the Overall Goal

The 13.5 percent statistic emerging from the base figure analysis in Section II is higher than Caltrans' current overall goal of 10.5 percent DBE participation in federally-assisted contracts. BBC examined whether or not the 13.5 percent base figure should be adjusted downward.

Past volume of work performed. DBEs were awarded 9.0 percent of contract dollars based on BBC's analysis of Caltrans and Local Assistance federally-funded contracts from 2002 through April 2006. This demonstrated participation is lower than the possible base figure of 13.5 percent DBE participation. Recent DBE participation in these contracts is further discussed in Section IV of this report (see Figure IV-4).[1]

Caltrans could consider this information in assessing whether and how to make any step 2 adjustments in determining an overall annual goal.

Current DBE certification of minority- and women-owned firms. The 13.5 percent base figure counts minority- and women-owned firms that could potentially be certified as DBEs. It will be a challenge for Caltrans to encourage these business owners to obtain certification, many of whom have never pursued DBE certification. Caltrans would also need the resources to explain and review certification applications.

[1] It should be noted that Caltrans attained greater utilization of minority- and women-owned firms in the mid-1990s when it employed higher DBE and MBE/WBE goals.

About one in five minority- and women-owned firms in BBC availability analysis were DBE-certified in 2006. BBC's follow-up interviews with a sample of non-DBE-certified minority and female business owners found that most knew of DBE certification and were interested in certification but had not actively pursued it. In general, the potential that the firm would exceed the size or net worth standards was not a barrier to certification for these firms. Only a few of the firms that had once been DBE certified that did not renew their certification did so because they believed they would not meet size or net worth requirements. This is one of the reasons BBC did not count highest-revenue minority- and women-owned firms in the base figure analysis.

Caltrans should include the fact that many of the firms counted in the base figure analysis are not currently DBE certified when considering any step 2 adjustments.

Factors that Suggest an Upward Adjustment to the Overall Goal

Analysis of other issues identified in 49 CFR Section 26.45 tend to suggest upward adjustments in the overall goal for DBE participation. BBC's analysis suggests that there are barriers to entry and expansion in the transportation construction and engineering industries that may begin with education and training and continue through forming a business and gaining access to capital. Appendix F describes this information in detail.

Entry into the construction industry. BBC examined education, employment and advancement for the construction industry in California.

Education. Many owners of construction businesses have limited formal education, as discussed in Appendix F. Education does not appear to be a barrier to entry of minorities and women into the construction industry.

Employment. Representation of African Americans in the construction industry is relatively low compared to other industries in California, even among entry level jobs. The representation of women in construction as a whole is relatively low and very few women in the construction trades are involved in transportation construction. Representation of Hispanic Americans in the construction industry is considerably higher than for all industries as a whole (37 percent in construction and 29 percent in all industries in California).

Advancement. There appear to be disparities in the advancement of Hispanics to certain construction occupations and first-line supervisor positions. Compared to non-Hispanic whites (and men), relatively few African Americans, Hispanic Americans and women working in construction are managers.

Entry into the engineering industry. BBC examined education, employment and self-employment in the California engineering industry.

Education. Lack of college education appears to be a barrier for African Americans, Hispanic Americans and Native Americans, which ultimately affects representation in the California engineering industry. Disparities in educational attainment for African Americans and Hispanic Americans appear at the high school level, which may affect college opportunities and enrollment into engineering programs. These factors may affect the number of African Americans, Hispanic Americans and Native Americans working as engineers.

Other disparities in employment. There is also low representation of women among civil, environmental and geological engineers that cannot be explained by overall levels of college education.

Business formation and ownership. BBC examined U.S. Census data on business ownership rates using similar methods to the information reviewed in the court cases involving the Illinois and Minnesota departments of transportation.

Construction. African Americans, Hispanic Americans, Subcontinent Asian Americans and women working in the California construction industry are less likely than non-Hispanic whites to own construction businesses. BBC, through regression analysis, identified statistically significant disparities after controlling for neutral factors (see Appendix H).

If members of these groups working in the construction industry owned businesses at the same rate as non-Hispanic whites (and men), there would be about twice as many construction firms owned by African Americans, Hispanic Americans, Subcontinent Asian Americans and women in California.

Engineering. African Americans, Asian-Pacific Americans, Hispanic Americans and women working in the engineering industry are less likely to be business owners than others in the industry. BBC found statistically significant disparities for African Americans, Asian-Pacific Americans and women after controlling for factors such as age and education (see discussion of regression analysis in Appendix H).

If African Americans, Asian-Pacific Americans and women working in the engineering industry owned businesses at the same rate as non-Hispanic whites (and men), there would be nearly twice as many engineering firms owned by members of these groups in California than observed today. After controlling for other factors, business ownership rates were higher for Native Americans than non-Hispanic whites working in the engineering industry.

Rates of business closure. African American-owned firms in California, in general, are more likely to close than other firms (see Appendix F).

Access to capital. There is evidence that minority-owned firms face disadvantages in accessing capital necessary to start and expand businesses.

Business capital from home equity. Home equity is an important source of capital for business start-up and growth.

- Relatively fewer African Americans, Hispanic Americans and Native Americans in California own homes than non-Hispanic whites, and those who do own homes tend to have lower home values.
- African Americans, Asian Americans, Hispanic Americans and Native Americans applying for home mortgages are more likely than non-minorities to have their applications denied.
- African American, Hispanic American and Native American mortgage borrowers are more likely to have subprime loans.

Business loans. BBC also identified disparities in access to business loans for certain minority groups. African American-, Asian American- and Hispanic American-owned businesses have higher denial rates when applying for business loans, and when they receive loans they have lower loan amounts. After accounting for certain neutral influences, firms owned by African Americans and Hispanic Americans remain significantly more likely to have their loans denied than other firms (see Appendix H).

Relatively more African American- and Hispanic American-owned firms that need credit do not apply for loans because they fear being denied the loan.

Bonding. Interviews with business owners and trade associations indicated difficulty obtaining bonding for small and new construction contractors in California. Problems in obtaining bonding were reported in interviews with minority- and women-owned firms and non-minority-owned firms. Section VI and Appendix I provide more information concerning bonding. Minority- and women-owned firms in the transportation contracting industry in California are more likely to be small businesses than majority-owned firms, and therefore may be adversely affected by barriers in obtaining bonding.

Insurance. Similarly, some small business owners had problems obtaining insurance required for Caltrans projects. These issues are further explored in Sections V through VIII and in Appendix I.

Largest bids of minority- and women-owned firms. In the Availability Survey, BBC asked firms in the transportation construction and engineering industry to identify the largest contract/subcontract a firm had received or bid on in the past five years. There were some minority groups for which "bid capacity" lagged other firms, but these disparities were explained by firm specialization and age.[2]

Business earnings. BBC examined U.S. Census data on earnings of business owners in construction and engineering using similar methods to the information reviewed in the court cases involving the Illinois and Minnesota departments of transportation. BBC identified disparities in earnings of firms in California for certain minority groups and for women (detailed results are found in Appendices F and H):

- Earnings of construction firms owned by African Americans and Hispanic Americans are substantially lower than non-Hispanic whites after controlling for age, education and other factors (statistically significant differences). African-American construction business owners earn about 41 percent less than average. Although these results are for the California construction industry as a whole, African American-, and Hispanic American-owned businesses in the transportation construction industry have lower annual revenue than majority-owned firms.
- After controlling for other factors, Subcontinent Asian Americans who own construction firms earn more from their businesses than non-Hispanic whites (statistically significant difference).
- Women who own engineering firms earn less than men do after controlling for factors such as age and education (statistically significant difference). Native American owners of engineering firms earn more than non-Hispanic whites.

[2] The extent to which minority- and women-owned firms tend to be younger and in different subindustries than majority-owned firms may not be an entirely "neutral" explanation for disparities in bid capacity if past discrimination has influenced whether there are relatively few older MBE/WBE firms or the relative concentration of MBE/WBEs in different subindustries.

Summary

There are reasons for Caltrans to consider downward adjustments to the base figure for overall DBE participation. It will be difficult for Caltrans to encourage the many non-DBE-certified firms to apply for certification. Analysis of local marketplace data reveals reasons for upward adjustments to the base figure. This information indicates barriers to entry into the California construction and engineering industries, low rates of business ownership for certain groups working in the industries, lower business earnings and other barriers such as access to capital.

Caltrans should include all of the above information in its consideration of whether or not to make any step 2 adjustment to a base figure for the overall annual DBE goal.

SECTION IV.
Utilization and Disparity Analysis for Caltrans and Local Assistance Contracts

The Federal DBE Program requires states to determine the percentage of the overall annual DBE goal that can be achieved through neutral means and the percentage, if any, to be achieved through race- and gender-based measures. Relative utilization of minority- and women-owned firms on state-funded transportation construction and engineering contracts, which do not have DBE contract goals, is one way of examining what is achieved through neutral means. Because Caltrans discontinued setting DBE goals on federally-funded contracts on May 1, 2006, analysis of DBE and MBE/WBE utilization after May 1 is also instructive. Utilization on state contracts, and for federally-funded contracts after May 1, 2006, can then be compared with utilization of minority- and women-owned firms for federally-funded contracts when DBE contract goals are in place.

Figure IV-1.
Defining and measuring "utilization"

"Utilization" of minority- and women-owned firms refers to the share of contract dollars going to these MBEs and WBEs. BBC reports results for both certified DBEs (firms certified as disadvantaged business enterprises in the year of the specific contract), and for all minority- and women-owned firms. BBC also examines results by race/ethnic/gender group.

Utilization is expressed as a percentage of prime contract and subcontract *dollars*. "Prime contract dollars" are total contract dollars less the money identified as going to subcontractors. For example, WBE utilization of 5 percent means that 5 percent of the contract dollars examined went to women-owned firms. Expressed another way, 5 cents of every contract dollar went to WBEs.

Information concerning utilization of minority- and women-owned firms is useful on its own, but is even more instructive when compared with a benchmark for the level of utilization expected given relative availability of minority- and women-owned firms for a particular set of contracts. BBC introduces this "disparity analysis" at the end of this section of the report.

As outlined in Figure IV-1, "utilization" of minority- and women-owned firms refers to the percentage of contract dollars going to MBE/WBEs. BBC examined utilization of minority- and women-owned firms as prime contractors and subcontractors in Caltrans, Local Assistance and SR 125 construction and engineering contracts. The study period was 2002 through 2006.

BBC's analysis of MBE/WBE utilization goes far beyond what Caltrans currently reports to the USDOT:

> In addition to utilization of certified DBEs, BBC examined utilization of minority- and women-owned firms including firms that are too large to be certified as DBEs and those that have never sought DBE certification. (Reasons for studying MBE/WBEs including those not currently certified as DBEs are discussed in Section II.) The disparity analysis performed at the end of this section focuses solely on minority- and women-owned firms.

Figure IV-2.
MBE/WBE utilization and DBE utilization

To analyze the issues raised in implementing the Federal DBE Program, BBC examined minority- and women-owned in three ways:

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. "WBEs" refer to white women-owned firms.

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.

- The study team collected data on subcontractor utilization in a consistent fashion for both DBE/MBE/WBEs and majority-owned firms to be able to accurately report DBE and MBE/WBE share of subcontract dollars for sets of contracts with and without DBE contract goals. Data collection procedures are summarized in Figure IV-3 and explained in greater detail in Appendix D.
- Caltrans does not currently analyze DBE or MBE/WBE utilization on state-funded contracts. Because of the importance of this information to the disparity study, the study team developed and implemented a data collection program for these state-funded contracts and a parallel program for federally-funded contracts to be able to accurately compare utilization between the two sets of contracts.
- BBC worked with Caltrans to request similar information from cities, counties and other local governments that award transportation contracts with federal and state money administered through Caltrans ("Local Assistance" contracts for "subrecipients"). Because of the large number of Local Assistance contracts, BBC prepared a stratified random sample of contracts and worked with Caltrans to request prime contract and subcontract information for these contracts and associated subcontracts from local agencies (also discussed in Appendix D).

MBE/WBE and DBE Utilization

Federally-funded transportation contracts when DBE goals were in place. Prior to moving to an all race- and gender-neutral implementation of the Federal DBE Program on May 1, 2006, Caltrans could set DBE contract goals for federally-funded contracts and Caltrans allowed local agencies with USDOT-funded contracts to set DBE contract goals. Prime contractors bidding on Caltrans projects would need to include DBE participation at a level to meet the goals or show good faith efforts to do so. Caltrans set 0 percent DBE goals on some federally-funded contracts.

Figure IV-3.
Utilization data collection

The utilization information the BBC study team collected for construction contracts is based on dollars at time of award and requests to sublet to specific subcontractors. BBC obtained hard copy records of requests to sublet from Caltrans contract files, and requested similar information for construction contracts awarded by local agencies. Utilization based on dollars at time of award and request to sublet may not perfectly match utilization based on actual payments to prime contractors and subcontracts at the end of the project. These payment data were not consistently available for construction contracts, and BBC also sought to analyze information on construction contracts awarded after May 1, 2006 that might not have been completed and closed by December 2006, the end date for the utilization analysis.

BBC found that data for Caltrans engineering contracts based on monthly invoices for prime consultants and subconsultants were more reliable than award information because subconsultants, and their share of the work, might not be consistently identified at time of award. BBC sampled engineering contracts and the study team pulled contract administration files in districts to identify primes and subconsultants and their payments. In some cases, Caltrans districts had already compiled consultant invoice information into spreadsheets, which BBC analyzed without needing to sample. BBC also requested data from local agencies for prime and subcontract dollars for a sample of Local Assistance engineering contracts.

In total, BBC collected and analyzed information for more than 10,000 prime contracts and subcontracts pertaining to Caltrans, Local Assistance and SR 125 transportation construction and engineering projects. (SR 125 is a toll road receiving federal financial assistance located in the San Diego area.) Utilization on Caltrans construction contracts is based on BBC's attempts to obtain information on all federally- and state-funded contracts for 2002 through 2006. Utilization for Caltrans engineering contracts is based on the population of engineering contracts for some districts and a very large sample of contracts for other districts (appropriately weighted in the utilization analysis). Utilization for Local Assistance contracts is based on a stratified random sample of contracts that focused on relatively large samples of the biggest federally- and state-funded contracts. BBC obtained information on 42 percent of the total Local Assistance contract dollars through this approach, as discussed in detail in Appendix D.

The BBC study team coded information concerning prime contract/subcontract status, type of work performed size of contract element, location of contract, and funding based on information collected for each contract element. Appendix D provides additional information as to how these data elements were collected.

BBC examined 6,673 prime contracts and subcontracts for federally-funded contracts from 2002 through April 2006, including Caltrans, Local Assistance and SR 125 contracts. Because the SR 125 project (a toll road in San Diego County) was subject to the Federal DBE Program, BBC included it with the Caltrans and Local Assistance federally-funded projects analyzed for 2002 through April 2006.

From 2002 through April 2006, total utilization of minority- and women-owned firms on federally-funded contracts was 14.7 percent. This utilization includes prime contracts and subcontracts. Of this 14.7 percent utilization, 9.0 percentage points represented firms certified as DBEs. The balance (5.7 percentage points) was minority- and women-owned firms not certified as DBEs in the year of the contract. In Figure IV-4 on the following page (and similar figures in Sections IV through VIII), DBE utilization is shown in the bottom portion of the bar. The difference between total MBE/WBE utilization (the statistic shown on top of the bar) and DBE utilization is utilization of MBE/WBEs that were not certified as DBEs at the time of the contract.

DBEs and MBE/WBE utilization on state-funded contracts. Since 1998, Caltrans has implemented only race- and gender-neutral measures on state-funded contracts. The 2002 through 2006 state-funded contracts awarded by Caltrans or by local agencies through the Caltrans Local Assistance program reflect MBE/WBE utilization on contracts without DBE contract goals. BBC studied MBE/WBE utilization for 4,305 state-funded transportation construction and engineering contracts and subcontracts for this time period.

Comparison of MBE/WBE utilization on state-funded contracts with MBE/WBE utilization on federally-funded contracts suggests that, without goals, utilization of minority- and women-owned firms is lower than found when goals were applied. As shown in Figure IV-4, MBE/WBE utilization was 11.4 percent on state-funded contracts, below that identified for federally-funded contracts prior to April 2006.

One must caution that a difference in MBE/WBE utilization between federally-funded contracts and state-funded contracts could reflect factors other than the DBE goals program. Types of work, sizes of contracts and locations of the projects could explain some of the differences in MBE/WBE utilization. The disparity analysis at the close of this section controls for these and other factors.

Figure IV-4.
MBE/WBE share of prime contract/subcontract dollars for transportation construction and engineering contracts, federal vs. state funding

Note:

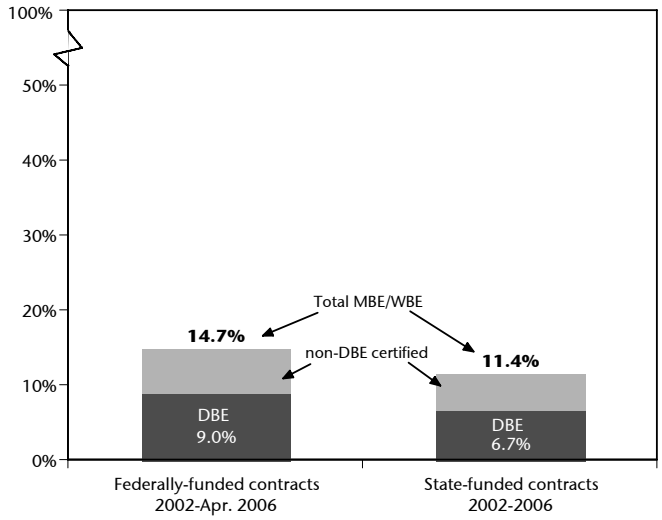
Statistics above each bar is total MBE/WBE utilization. Certified DBE utilization is noted in the bottom portion of each bar. The difference is utilization of MBE/WBEs that were not DBE certified.

For more detail, and for results by DBE group, see Figures E-24 and E-68 in Appendix E.

Number of contracts analyzed is 6,673 for federally-funded contracts and 4,305 for state-funded contracts.

Source:

BBC Research and Consulting from contract data on Caltrans, Local Assistance and SR 125 contracts.



Federally-funded contracts after May 1, 2006. Caltrans moved to an all race- and gender-neutral program on May 1, 2006. Based on the federally- funded construction and engineering contracts BBC identified between May 1 and the end of December 2006, ending contract goals on federally-funded contracts had little effect on overall MBE/WBE utilization. Utilization of certified DBEs substantially decreased.

Figure IV-5 portrays DBE and MBE/WBE utilization on federally-funded contracts before and after May 1, 2006. Again, the gross MBE/WBE utilization for these two time periods are not adjusted for differences in contract types, sizes and locations. The disparity analysis at the close of this report section makes comparisons in utilization after adjusting for these and other factors. In addition, the data for May through December 2006 are based on a small number of prime contracts and subcontracts (192). Most contracts for 2006 were let prior to May 1.

Figure IV-5.
MBE/WBE share of prime/ subcontract dollars for federally-funded transportation construction and engineering contracts, before and after May 1, 2006

Note:

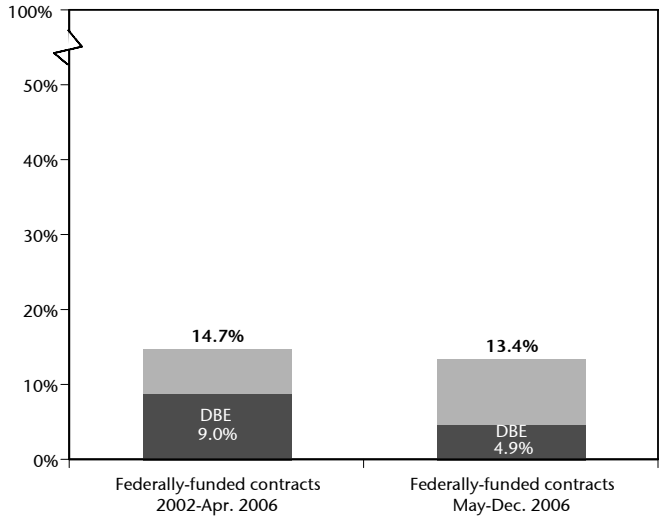
Statistics above each bar is total MBE/WBE utilization. Certified DBE utilization is noted in the bottom portion of each bar. The difference is utilization of MBE/WBEs that were not DBE certified.

For more detail, and for results by DBE group, see Figures E-24 and E-25 in Appendix E.

Number of contracts analyzed is 6,673 for 2002-April 2006 federally-funded contracts and 192 for May-December 2006 federally-funded contracts.

Source:

BBC Research and Consulting from contract data on Caltrans, Local Assistance and SR 125 contracts.



Utilization of firms by race and gender group. Hispanic American-owned firms and white women-owned firms received the largest share of prime/subcontract dollars on both federally-funded and state-funded contracts. Other minority groups received a much smaller share of contract dollars.

Hispanic American-owned firms. On federally-funded contracts from 2002 through April 2006, 6.6 percent of combined prime contract and subcontract dollars went to Hispanic American-owned firms. Utilization of Hispanic American-owned firms was higher for federally-funded contracts from May through December 2006 and among all state-funded contracts. Only including Hispanic American-owned firms certified as DBEs, utilization was 5.5 percent for federally-funded contracts from 2002 through April 2006 and was lower for federally-funded contracts after May 1, 2006 and for state-funded contracts (see Figure IV-6).

Women-owned firms. About 4.9 percent of federally-funded contract dollars from 2002 through April 2006 went to white women-owned firms. Utilization of WBEs was lower for federally-funded contracts after May 1, 2006 and for state-funded contracts. Only counting white women-owned firms that were DBE-certified, utilization of WBEs was less than 1 percent. (Note that "women-owned firms" means businesses owned by white women. Utilization of firms owned by minority women is included in the utilization figures for the specific race or ethnic group.)

The data suggest that relatively little of the utilization of WBEs is by firms certified as DBEs, regardless of whether DBE goals were in place (see Figure IV-6).

Asian-Pacific American-owned firms. For federally-funded contracts for 2002-April 2006, Asian-Pacific American-owned firms received 1.2 percent of total contract dollars. Utilization was lower for state-funded contracts. Most of the dollars going to Asian-Pacific American-owned firms are to firms that are DBE certified (regardless of whether the DBE goals program applied to the set of contracts).

Subcontinent Asian American-owned firms. Subcontinent Asian American-owned firms received 0.8 percent of federally-funded contract dollars for 2002-April 2006. Utilization was lower after May 1, 2006 and for state-funded contracts. Utilization was 0.5 percent for Subcontinent Asian American-owned firms that were certified as DBEs.

African American-owned firms. Utilization of African American-owned firms was 0.6 percent for federally-funded contracts and 0.3 percent for state-funded contracts. Most of the dollars going to African American-owned firms were to businesses certified as DBEs.

Native American-owned firms. Native American-owned firms received 0.6 percent of federally-funded contract dollars for 2002-April 2006 and almost none of these dollars for May through December 2006 based on the data analyzed by BBC. On state-funded contracts, Native American-owned firms accounted for 0.7 percent of the contract dollars. Almost all of the utilization of Native American-owned firms pertains to firms that are certified as DBEs (true for both federally-funded and state-funded contracts).

DBEs owned by white males. BBC identified one subcontract on a federally-funded construction contract and one subcontract on a federally-funded engineering contract that went to firms owned by white males that were DBE-certified. In terms of dollars, utilization was below one tenth of 1 percent.

Figure IV-6.
DBE and MBE/WBE share of prime/subcontract dollars for transportation construction and engineering contracts, by race/ethnicity/gender

	Federally-funde		State-funded contracts 2002–2006
MBE/WBEs			
African American-owned	0.6%	0.5%	0.3%
Asian-Pacific American-owned	1.2	1.4	0.6
Subcontinent Asian American-owned	0.8	0.7	0.5
Hispanic American-owned	6.6	8.3	6.6
Native American-owned	0.6	0.0	0.7
Total MBE	**9.8%**	**10.9%**	**8.8%**
WBE (white women-owned)	4.9	2.6	2.7
Total MBE/WBE	**14.7%**	**13.4%**	**11.4%**
DBEs			
African American-owned	0.5%	0.5%	0.2%
Asian-Pacific American-owned	1.0	1.3	0.5
Subcontinent Asian American-owned	0.5	0.2	0.4
Hispanic American-owned	5.5	2.7	4.3
Native American-owned	0.6	0.0	0.7
Total MBE	**8.2%**	**4.7%**	**6.0%**
WBE (white women-owned)	0.9	0.1	0.7
White male-owned DBE	0.0	0.0	0.0
Total DBE	**9.0%**	**4.9%**	**6.7%**

Note: Numbers rounded to nearest tenth of 1 percent. Numbers may not add to totals due to rounding.

For more detail, see Figures E-24, E-25 and E-68 in Appendix E.

Number of contracts analyzed is 6,673 for 2002-April 2006 federally-funded and 192 for May-December 2006 federally-funded and 4,305 for 2002-2006 state-funded contracts.

Source: BBC Research and Consulting from contract data on Caltrans, Local Assistance and SR 125 contracts.

Overall Disparity Analysis

Interpreting any differences in MBE/WBE utilization for contracts with and without goals is difficult because the types, sizes and locations of contracts and subcontracts may differ between federally-funded contracts for 2002 through April 2006 and state-funded contracts for 2002 through 2006. Federally-funded contracts for May through December 2006 could be different from contracts prior to May 1, 2006.

In addition, simple comparisons of MBE/WBE utilization for contracts with and without goals do not show whether minority- and women-owned firms are under- or over-utilized relative to the utilization expected based on MBE/WBE availability for those specific sets of contracts and subcontracts. It may be that utilization of MBE/WBEs is below what would be expected even with goals in place. Alternatively, MBE/WBE utilization could exceed availability for contracts without goals.

The following disparity analysis controls for differences in types, sizes and locations of contracts and subcontracts. By comparing actual utilization with the relative availability of minority- and women-owned firms to perform that set of prime contracts and subcontracts, BBC can determine how contract goals affect MBE/WBE utilization and whether current neutral remedies are sufficient to bring MBE/WBE utilization in line with relative MBE/WBE availability. If disparities exist, disparity analysis helps to identify the types of contracts and subcontracts and the race/ethnicity/gender groups showing disparities.

Methodology. BBC compared percentage utilization of minority- and women-owned firms by race/ethnicity/gender with the share of contract dollars that might go to minority- and women-owned firms based on BBC availability analysis.

Example of a disparity analysis table. The balance of this section of the report, and the disparity results presented in the sections that follow, are based on the detailed disparity tables found in Appendix E. Therefore, it is useful to describe the detailed analysis from which BBC draws results.

Figure IV-7 on the following page presents an example of a disparity table from Appendix E. This disparity table pertains to Caltrans, Local Assistance and SR 125 federally-funded construction and engineering contracts awarded from 2002 through April 2006. It includes dollars for prime contractors and subcontractors (and suppliers when data were available). DBE contract goals were applied during this time period for federally-funded contracts. Each of the disparity tables include the same columns and rows.

Figure IV-7.
MBE/WBE utilization, availability and disparity analysis for prime contracts/subcontracts on federally-funded transportation construction and engineering contracts, 2002–April 2006

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	6,673	$5,882,603	$8,216,123				
(2) MBE/WBE	2,780	$831,414	$1,205,425	14.7	17.6	-2.9	83.4
(3) WBE	731	$305,766	$398,715	4.9	4.7	0.2	103.7
(4) MBE	2,052	$525,907	$806,969	9.8	12.9	-3.1	76.0
(5) African American-owned	108	$39,689	$47,382	0.6	2.4	-1.8	24.5
(6) Total Asian American-owned	434	$92,532	$170,462	2.1	2.6	-0.6	79.0
(7) Asian-Pacific American-owned	232	$54,641	$98,160	1.2	2.1	-0.9	56.4
(8) Subcontinent Asian American-owned	187	$36,501	$69,397	0.8	0.5	0.3	165.9
(9) Hispanic American-owned	893	$350,936	$538,700	6.6	7.2	-0.7	90.9
(10) Native American-owned	212	$21,903	$50,426	0.6	0.7	-0.1	86.1
(11) Unknown MBE	405	$20,847					
(12) DBE-certified	2,184	$508,010	$742,215	9.0			
(13) Women-owned DBE	441	$60,978	$71,587	0.9			
(14) Minority-owned DBE	1,722	$440,012	$670,548	8.2			
(14) African American-owned DBE	99	$34,249	$41,513	0.5			
(16) Total Asian American-owned DBE	338	$74,765	$127,278	1.5			
(17) Asian-Pacific American-owned DBE	202	$47,748	$83,914	1.0			
(18) Subcontinent Asian American-owned DBE	133	$26,995	$43,301	0.5			
(19) Hispanic American-owned DBE	702	$291,690	$451,413	5.5			
(20) Native American-owned DBE	205	$21,184	$50,081	0.6			
(21) White male-owned DBE	2	$78	$339	0.0			
(22) Unknown DBE-MBE	375	$17,864					
(23) Unknown DBE	22	$7,202					

Note: Includes Caltrans, Local Assistance and SR 125 contracts. Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Utilization. Column (a) of this table notes the number of prime contracts and subcontracts in the sample (6,673 total). Column (b) identifies the combined dollars of prime contracts and subcontracts in the sample of contract elements. (Prime contract dollars refer to the dollars retained by the prime contractor after subtracting subcontract dollars.) Dollars are reported in thousands. This disparity table examines contract dollars totaling $5.9 billion.

Column (c) is the estimated total dollars going to each group if BBC had been able to examine all Caltrans, Local Assistance and SR 125 federally-funded contracts during this time period. Sampling procedures and weighting of contract dollars are described in Appendix D. BBC had to sample Local Assistance contracts (and a small portion of Caltrans engineering contracts), which is why BBC needed to estimate total dollars of contracts after appropriate weighting of the sampled contracts.

Column (d) divides the estimated dollars for each group by the estimated total amount of contract dollars to calculate percentage utilization for each group.

Figure IV-7 also has rows for each firm type. "All firms" in row (1) pertains to combined majority-, minority- and women-owned firms. "MBEs" refers to all minority-owned firms, whether or not they are DBE-certified. "WBEs" are white women-owned firms. "Total Asian American-owned firms" in row (7) provides a total for Asian-Pacific American-owned firms and Subcontinent Asian-owned firms. This subtotal is provided because there are occasionally some Asian American-owned firms included in the analysis that had no further race/ethnicity information. Note that one should add values for total Asian American-owned firms to other minority groups when calculating total MBE utilization or availability (and not also add values for Asian-Pacific American-owned and Subcontinent Asian American-owned firms).

Row (11) shows "unknown MBE." These firms were identified as minority-owned but could not be further classified. They are allocated among each race/ethnic group of MBEs in proportion to the known dollars for each group.

The bottom half of Figure IV-7 reports utilization for firms that were certified as DBEs in the years in which the contract was awarded. Row (22) and row (23) pertain to certified DBEs for which specific race/ethnicity/gender was not known. Dollars for firms listed under "unknown DBE-MBE" were allocated among other DBE-certified minority-owned firms in proportion to the known dollars for each group. A similar process was used for "unknown DBE," except that dollars were also apportioned to women-owned DBEs and white male-owned DBEs in proportion to the known dollars for those groups.

Relative availability. BBC developed an estimate of relative availability of firms for each race/ethnicity/gender group following the procedures described in Section II. Availability is also represented as a percentage. The availability figure for a particular group represents a benchmark with which to evaluate relative utilization for that group for a particular set of contracts. BBC separately calculated relative availability for each group and set of contracts and subcontracts according to the procedures outlined in Section II (and described in more detail in Appendix D).

Column (e) of Figure IV-7 reports relative availability for this disparity table. Based on the types of work involved in the prime contracts and subcontracts included in the Figure IV-7 analysis, plus the sizes of these contract elements and their geographic location, BBC estimated that 17.6 percent of the contract dollars would go to minority- and women-owned firms after considering each firm's

specialization, interest and qualifications in prime versus subcontract work, geographic reach and bid capacity of firms to perform this work.

Differences between utilization and availability. The first step in analyzing whether there was a disparity between the relative utilization of a particular group and its relative availability is to subtract percentage utilization from percentage availability. When examining all MBE/WBEs in Figure IV-7, utilization was 2.9 percentage points below availability. This difference is reported in column (f).

It is sometimes difficult to interpret absolute differences between relative utilization and relative availability, especially when utilization and availability are very small. Therefore, BBC also calculated a "disparity index," which divides percentage utilization by percentage availability and multiplies the result by 100. An index of "100" means that there is "parity" between relative utilization and availability for a particular group. An index below 100, especially below 80, may indicate a substantial disparity. Column (g) in the disparity tables provides the disparity index for each group.

Note that all percentages in the disparity tables were rounded to the nearest tenth of 1 percent after making all calculations. Percentages correctly add and subtract, even though the rounding may make actual sums appear to differ by one tenth of 1 percent. In addition, the disparity index is derived from the detailed data for percentage utilization and availability before any rounding.

The DBE utilization statistics at the bottom of Figure IV-7 are provided as reference. BBC did not conduct disparity analyses for certified DBEs for the reasons described in Section II.

Results of a disparity analysis. The disparity analysis shown in Figure IV-7 reflects the influence of DBE contract goals, as goals were typically set on federally-funded contracts prior to May 1, 2006. Any lack of disparity for a particular MBE/WBE group could suggest that the DBE contract goals program was effective in increasing utilization for that group.

Column (d) indicates that the combined prime contract and subcontract utilization of MBE/WBEs was 14.7 percent for these contracts. This utilization was below what would be anticipated based on relative availability to perform the work involved in these contracts — 17.6 percent — as shown in column (e). Utilization of MBE/WBEs was 3 percentage points below availability, a statistic presented in column (f). (Note that all statistics in the disparity analysis are rounded to the nearest tenth of 1 percent.)

Dividing 14.7 percent utilization by 17.6 percent availability and multiplying by 100 yields a disparity index of 83.4. There is a disparity between overall utilization and availability of minority- and women-owned firms even with the DBE contract goals program in place. Minority- and women-owned firms received about 83 cents out of every dollar of utilization expected based on relative MBE/WBE availability for this work.

Figure IV-7, and the other disparity tables in Appendix E, allow exploration of the components of any overall disparity for MBE/WBEs. As Figure IV-7 demonstrates, utilization of women-owned firms (4.9 percent) is very close to relative availability of women-owned firms to perform the work involved in this set of contracts (4.7 percent). The disparity index for women-owned firms is approximately 104. There is no disparity for the utilization of women and firms for this set of contracts.

On the other hand, African American-owned firms received only 0.6 percent of contract dollars, less than the 2.4 percent relative availability to perform the work included in Figure IV-7. The disparity index for African American-owned firms is 24.5, indicating that African American-owned firms received one-quarter of the dollars on these contracts that would be anticipated based on relative availability of African American-owned firms to perform this work. There were also relatively large disparities for Asian-Pacific American-owned firms.

Subcontinent Asian American-owned firms, shown in row (8) of Figure IV-7, had utilization considerably greater than their relative availability to perform the work. About 0.8 percent of the dollars of these contracts went to Subcontinent Asian American-owned firms, more than the 0.5 percent relative availability of Subcontinent Asian American-owned firms to perform this work. The disparity index for Subcontinent Asian American-owned firms was 166. Because the DBE contract goals program applied to these contracts, it is difficult to interpret utilization exceeding availability for any group potentially benefiting from the DBE contract goals.

Figure IV-8 summarizes the disparity indices from Figure IV-7. A line down the center of the graph shows an index of 100, which indicates "parity" between relative utilization and relative availability for a group. Indices under 100 may indicate a disparity between utilization and availability. The graph ends at a disparity index of 200 even though, in some cases, disparity indices exceed 200. For reference, a line is drawn at an index of 80. In the context of employment law, some courts use 80 as a benchmark for what may indicate a substantial disparity. Although this may not be as important a benchmark for evaluating disparities between utilization and availability of minority- and women-owned firms, BBC provides it here as a reference point MBE/WBE.

As Figure IV-8 shows, minority- and women-owned firms, overall, have utilization that is 83 percent of what would be expected based on overall MBE/WBE availability for these contracts. Utilization of each MBE/WBE group except for WBEs and Subcontinent Asian American-owned firms is below relative availability for that group, resulting in disparity indices below 100. Because DBE contract goals were typically in place for these contracts, it is difficult to interpret the disparity indices for WBEs and Subcontinent Asian American-owned firms.

Similarly, disparities for Hispanic American-owned firms and Native American-owned firms are relatively small for federally-funded contracts prior to May 1, 2006 (disparity indices are between 80 and 100).

Figure IV-8.
Disparity indices for MBE/WBE utilization as prime contractors and subcontractors on federally-funded transportation construction and engineering contracts, 2002-April 2006

Note:

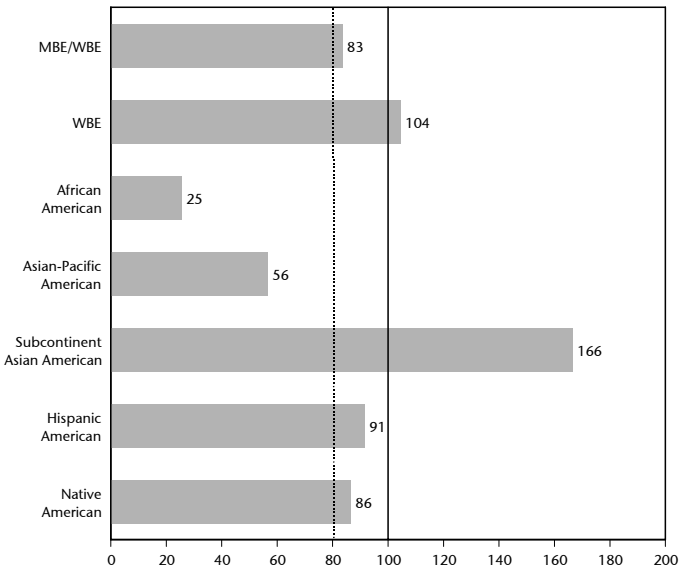
Includes Caltrans, Local Assistance and SR 125 contracts. Utilization and availability includes non-DBE-certified firms.

For more detailed information, see Figure E-24 in Appendix E.

Number of contracts analyzed is 6,673 for federally-funded contracts.

Source:

BBC Research and Consulting.



Disparity analysis for contracts with and without DBE contract goals. BBC first presents results for federally-funded contracts with DBE contract goals and state-funded contracts, which do not have DBE goals. The analysis then turns to federally-funded contracts after the DBE contract goals program was discontinued (May 1, 2006).

State-funded contracts. BBC was able to examine a large number of prime contracts and subcontracts on state-funded contracts for 2002 through 2006 (4,305 contract elements). No DBE contract goals applied to these contracts.

The disparity indices for state-funded contracts reflect calculations of MBE/WBE availability, by group, specific to the types, roles, sizes and locations of the work involved in these contracts (overall MBE/WBE availability was 19.3 percent, somewhat higher than for federally-funded contracts for 2002-April 2006). However, utilization of MBE/WBEs was only 11.4 percent, lower than for federally-funded contracts with DBE goals. The resulting disparity index is 59, suggesting that, without race- and gender-based measures, utilization of minority- and women-owned firms will only reach 59 percent of the level expected based on availability for those contracts (59 cents out of every dollar of utilization expected based on MBE/WBE availability for that work). The disparity index for state-funded contracts is considerably lower than the disparity index for federally-funded contracts from 2002 through April 2006 (83).

State-funded contracts consistently showed lower values for disparity indices for WBEs and each MBE group:

- The disparity index of 48 for WBEs suggests that utilization was less than one-half of what would be anticipated from the relative availability of women-owned firms.
- Disparity indices for African American- and Asian-Pacific American-owned firms indicated large disparities for state-funded contracts.
- The disparity index for Native American-owned firms was 65, indicating a more substantial disparity than for federally-funded contracts.

- As with federally-funded contracts, utilization of Subcontinent Asian American-owned firms on state-funded contracts was considerably above what would be anticipated from relative availability of these firms.
- The disparity index for Hispanic American-owned firms for state-funded contracts was 81, similar to the index for contracts with DBE goals.

Figure IV-9 presents the results for state-funded contracts.

Figure IV-9.
Disparity indices for MBE/WBE utilization as prime contractors and subcontractors on federally- and state-funded transportation construction and engineering contracts

Note:

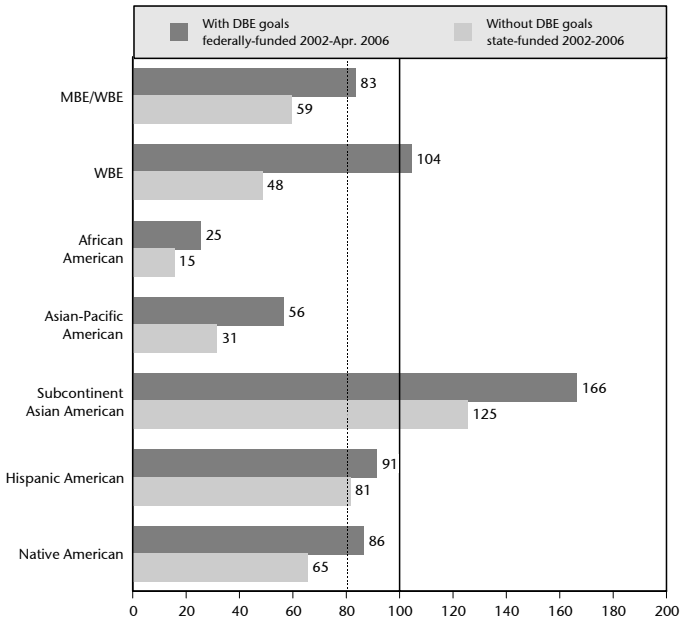
Includes Caltrans, Local Assistance and SR 125 contracts. Utilization and availability includes non-DBE-certified firms.

For more detailed information, see Figure E-24 and Figure E-68 in Appendix E.

Number of contracts analyzed is 6,673 for federally-funded and 4,305 for state-funded contracts.

Source:

BBC Research and Consulting.



Federally-funded contracts after May 1, 2006. Figure IV-10 presented disparity indices for a group of federally-funded contracts that typically had DBE contract goals. Figure IV-10 compares these indices with the disparity indices for federally-funded contracts after May 1, 2006, which did not include DBE contract goals. The data on post-May 1, 2006 contracts is limited — there were only 192 contract elements (prime contracts and subcontracts) in the contract data collected for this time period. (Figure E-25 in Appendix E presents utilization and availability figures that lead to the disparity indices for post-May 1, 2006 contracts in Figure IV-10.)

Figure IV-10.
Disparity indices for MBE/WBE utilization as prime contractors and subcontractors on federally-funded transportation construction and engineering contracts, 2002-April 2006 and May-December 2006

Note:

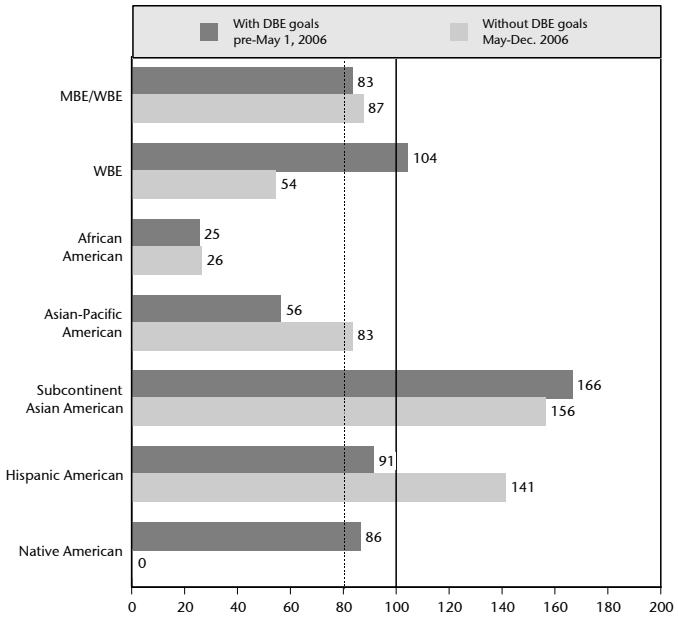
Includes Caltrans, Local Assistance and SR 125 contracts. Utilization and availability includes non-DBE-certified firms.

For more detailed information, see Figure E-24 and Figure E-25 in Appendix E.

Number of contracts analyzed is 6,673 for 2002-April 2006 federally-funded and 192 for May-December 2006 federally-funded contracts.

Source:

BBC Research and Consulting.



As the disparity indices in Figure IV-10 indicate, discontinuing the DBE contract goals program on May 1, 2006 had no negative effect on overall MBE/WBE utilization for May through December 2006. With DBE contract goals, MBE/WBEs were receiving 83 cents of every contract dollar expected based on MBE/WBE availability for that work. From the data collected for May through December 2006, MBE/WBEs received 87 cents of every contract dollar of utilization expected based on availability for those contracts.

Discontinuing the DBE goals may have had little impact on some groups and a larger effect on others. The disparity index for African American-owned firms, already low for federally-funded contracts prior to May 1, 2006, remained low after this date. The disparity index for Asian-Pacific American-owned firms was 83 for federally-funded contracts after May 1, 2006. Results for Subcontinent Asian American-owned firms showed utilization exceeding relative availability for federally-funded contracts without DBE contract goals. Utilization of Hispanic American-owned firms exceeded relative availability for the May-December 2006 contracts (disparity index of 141).

The study team identified only two subcontracts that went to Native American-owned firms on federally-funded contracts after May 1, 2006, amounting to very little dollars. The disparity index rounded to "0" for this group for the May-December 2006 contracts.

Also note that there may be a carryover effect of the DBE contract goals program in the last half of 2006 that may not hold after 2006.

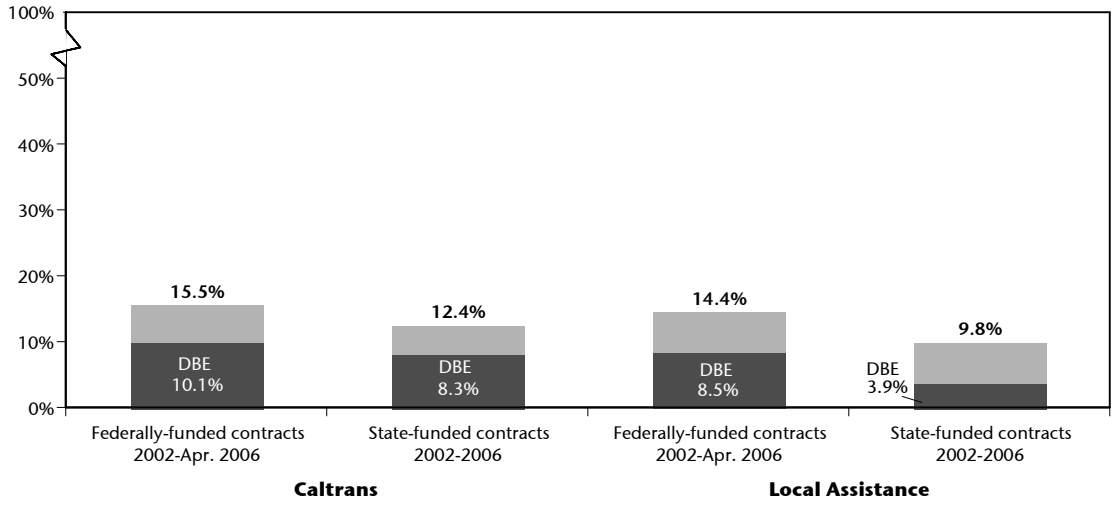
Differences between Caltrans Contracts and Local Assistance Contracts

Before considering relative utilization and availability by construction versus engineering contracts and for subcontracts versus prime contracts, the subjects of the following four sections of this report, BBC examined whether there were differences in disparity results depending on whether Caltrans directly let the contract or whether a local agency awarded the contract ("Local Assistance" contracts).

Federally-funded versus state-funded contracts. As illustrated in Figure IV-11 on the following page, DBE and MBE/WBE utilization for Local Assistance contracts was lower than

Caltrans contracts for both federally-funded contracts and state-funded contracts. (Results for Local Assistance contracts reflect a sample of 1,204 federally-funded prime contracts and subcontracts, and 458 state-funded prime contracts and subcontracts.)

Figure IV-11.
DBE and MBE/WBE share of prime/subcontract dollars for federally- and state-funded transportation construction and engineering contracts, Caltrans vs. Local Assistance



Note: Statistics above each bar is total MBE/WBE utilization. Certified DBE utilization is noted in the bottom portion of each bar. The difference is utilization of MBE/WBEs that were not DBE certified.

For more detail on Caltrans contracts, and for results by DBE group, see Figures E-2 and E-54 in Appendix E. For more detail on Local Assistance contracts, and for results by DBE group, see Figures E-12 and E-61 in Appendix E.

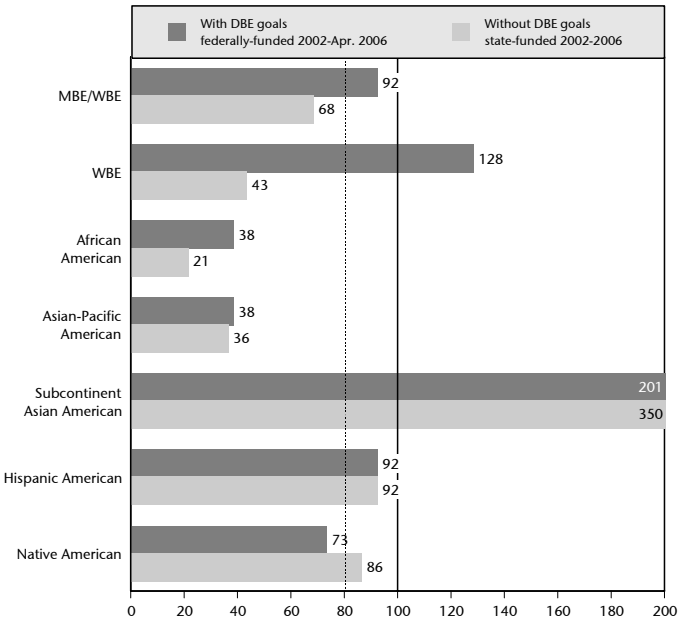
Number of contracts analyzed is 5,346 for 2002-April 2006 federally-funded Caltrans and 3,847 for 2002-2006 state-funded Caltrans and 1,204 for 2002-April 2006 federally-funded Local Assistance and 458 for 2002-2006 state-funded Local Assistance contracts.

Source: BBC Research and Consulting from contract data on Caltrans, Local Assistance contracts

Disparity analysis for Caltrans federally-funded versus state-funded contracts. On federally-funded Caltrans contracts prior to May 1, 2006, utilization of minority- and women-owned firms was 92 percent of what would be expected based on MBE/WBE availability for these contracts (based on 15.5 percent MBE/WBE utilization and 16.9 percent MBE/WBE availability). Among MBE groups, however, disparities were identified for African American-owned firms (disparity index of 39), Asian-Pacific American-owned firms (disparity index of 38) and Native American-owned firms (disparity index of 73). These disparities are similar to what was found for Caltrans and Local Assistance contracts combined.

On state-funded contracts awarded by Caltrans, overall MBE/WBE utilization was 68 percent of what would be expected based on relative MBE.WBE availability for these contracts. There were large disparities for WBEs, African American-owned firms and Asian-Pacific American-owned firms. The disparity index for Native American-owned firms was 86. Results were similar to those for all state-funded contracts, including Local Assistance contracts.

Figure IV-12.
Disparity indices for MBE/WBE utilization as prime contractors and subcontractors on Caltrans federally- and state-funded transportation construction and engineering contracts, 2002-April 2006 and 2002-2006



Note:

Utilization and availability includes non-DBE-certified firms.

For more detailed information, see Figure E-2 and Figure E-54 in Appendix E.

Number of contracts analyzed is 5,346 for federally-funded and 3,847 for state-funded contracts.

Source:

BBC Research and Consulting.

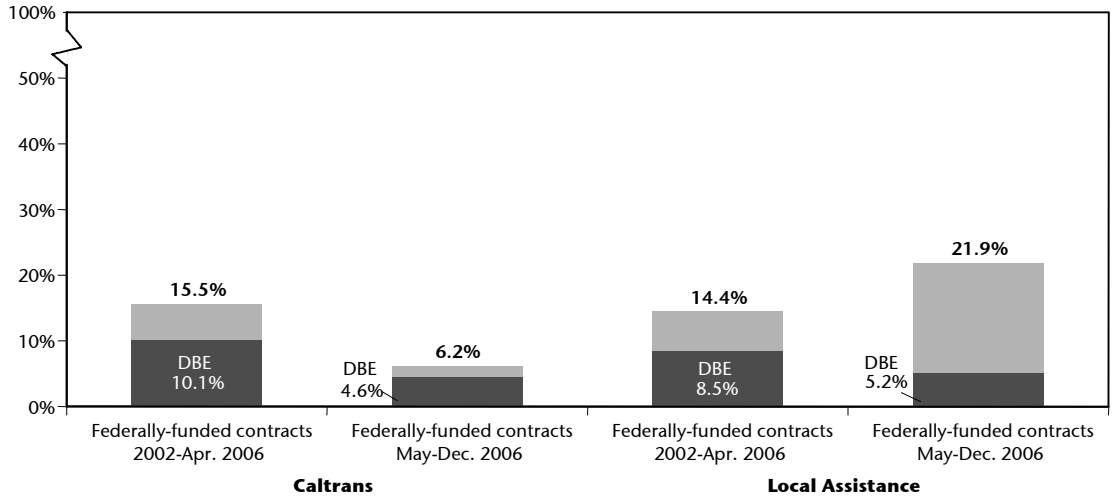
Disparity analysis for Local Assistance federally-funded versus state-funded contracts. There were disparities between utilization and availability for each MBE/WBE group for state-funded contracts awarded by local agencies. Overall, MBE/WBE utilization was only 46 percent of the level expected based on relative MBE/WBE availability for this work. Figure E-61 in Appendix E provides these results.

Federally-funded contracts before and after May 1, 2006. Based on data for 68 Caltrans prime contracts and subcontracts, MBE/WBE utilization on federally-funded contracts was 6.2 percent for May through December 2006, lower than the 15.5 percent found for 2002 through April 2006.

Based on the 124 prime contracts and subcontracts BBC was able to examine for Local Assistance contracts, MBE/WBEs received 21.9 percent of federally-funded contract dollars for May through December 2006 (see Figure IV-13 on the following page).

BBC further investigated why overall MBE/WBE utilization was higher for Local Assistance contracts after May 1, 2006. The increase in overall MBE/WBE utilization came from a small number of MBE/WBE prime contractors. MBE/WBE utilization as subcontractors declined after May 1, 2006 (comparison of Figures E-18 and E-19 in Appendix E).

Figure IV-13.
DBE and MBE/WBE share of prime/subcontract dollars for federally-funded transportation construction and engineering contracts, Caltrans vs. Local Assistance



Note: Statistics above each bar is total MBE/WBE utilization. Certified DBE utilization is noted in the bottom portion of each bar. The difference is utilization of MBE/WBEs that were not DBE certified.

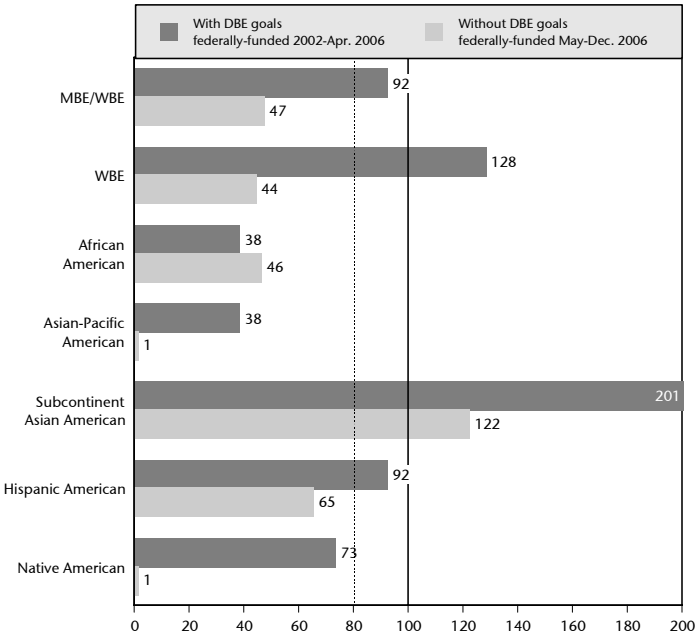
For more detail on Caltrans contracts, and for results by DBE group, see Figures E-2 and E-3 in Appendix E. For more detail on Local Assistance contracts, and for results by DBE group, see Figures E-12 and E-13 in Appendix E.

Number of contracts analyzed is 5,346 for 2002-April 2006 Caltrans and 68 for May-December 2006 Caltrans and 1,204 for 2002-April 2006 Local Assistance and 124 for May-December 2006 Local Assistance contracts.

Source: BBC Research and Consulting from contract data on Caltrans, Local Assistance contracts.

Disparity analysis for Caltrans federally-funded contracts after May 1, 2006. Disparities were found for each MBE/WBE group except for Subcontinent Asian American-owned firms for Caltrans contracts for May through December 2006 (see Figure IV-14). As previously mentioned, these results are based on relatively few contracts.

Figure IV-14.
Disparity indices for MBE/WBE utilization as prime contractors and subcontractors on Caltrans federally-funded transportation construction and engineering contracts, 2002-April 2006 and May-December 2006



Note:

Includes Caltrans and SR 125 contracts. Utilization and availability includes non-DBE-certified firms. For more detailed information.

See Figure E-2 and Figure E-3 in Appendix E.

Number of contracts analyzed is 5,346 for 2002-April 2006 and 68 for May-December 2006 contracts.

Source:

BBC Research and Consulting.

Local Assistance federally-funded contracts before and after May 1, 2006. Overall, the disparity index for MBE/WBE utilization on federally-funded Local Assistance contracts after May 1, 2006 was 120, indicating utilization that exceeded availability. However, there were disparities for women-, African American- and Native American-owned firms (see Figure E-13 in Appendix E). As with Caltrans contracts after May 1, 2006, these results are based on relatively few contracts.

Analysis of Statistical Significance of Any Disparities

Statistical significance of any disparities relates to the degree a researcher can reject "random chance" as a cause of the disparities. Often, chance in sampling of data is the factor that researchers consider in determining statistical significance of results. BBC's availability analysis, however, attempted to contact every firm identified in California related to transportation construction or engineering identified by Dun & Bradstreet, as described in Appendix C. Much of the utilization data analysis also uses data that approach a "population" of contracts. Nearly any disparity when comparing overall utilization with availability would be "statistically significant." Reasons why BBC went beyond this type of analysis of statistical significance are outlined in Figure IV-15.

Monte Carlo simulation. BBC went beyond examining "random chance" in sampling as an explanation of any disparities to analyze "random chance" in contract and subcontract awards. If each prime contract and subcontract element were the same dollar value, standard difference of proportions statistical tests could be used to explore chance in contract awards. BBC could simply determine whether the percentage of dollars received by MBE/WBEs was sufficiently different from percentage availability (given the number of contract elements in the data) that random chance could be rejected as the cause of the disparity at the 95 percent confidence level.

However, some contract elements are for millions of dollars and others may be only a few thousand dollars. More sophisticated statistical techniques must be used. "Monte Carlo" simulation analysis is a useful tool because there are many individual chances at winning work and each has a different payoff.

The technique works as follows:

- The statistical analysis starts by examining an individual contract element (a prime contract or subcontract).
- BBC determined from the Availability Survey the individual firms "available" for that contract element based on type of work, prime versus subcontract role, size of the prime contract or subcontract, and location of the work. Each firm meeting those criteria in the Availability Survey were assumed to have an equal chance of receiving that contract element.

Figure IV-15.
Consideration of sampling in the availability and utilization analysis

BBC attempted to collect all Caltrans construction contracts, and for some districts, all engineering contracts. By necessity, BBC drew a sample of Local Assistance contracts to be reported on by local agencies. Even with the sample, BBC obtained contracts that comprised an estimated 42 percent of all Local Assistance construction and engineering contract dollars. Therefore, statistical confidence in the results for the overall utilization figure of 14.7 percent for federally-funded and 11.4 percent for state funded contracts is high (+/- 1.8 and +/- 1.4 percentage points confidence interval respectively at the 95 percent confidence level).

BBC conducted telephone interviews with 18,675 such business establishments, a number of completed interviews that is so large as to often be treated as a "population," not a sample. BBC's analysis of the confidence interval around the estimate of MBE/WBEs representation among all firms available for Caltrans and local government transportation work, 32.3 percent, is accurate within about +/- 1 percentage point at the 95 percent confidence level (BBC applied the finite population correction factor when determining confidence intervals). At this level of accuracy in the availability analysis, a disparity index of 96 could technically be "statistically significant." BBC's availability figures for most minority groups are even more accurate (+/- two tenths of a percentage point). By comparison, most survey results for proportions reported in the popular press are +/- 5 percentage points or, at best, +/- 3 percentage points.

- The Monte Carlo simulation randomly chooses a firm for a contract element from the pool of available firms for that element. For example, the odds of a woman-owned firm receiving that contract element are equal to the number of women-owned firms available for that work divided by the total number of firms available for that contract element based on what is known about the contract element and the firms in the Availability Survey that meet those criteria.
- A single Monte Carlo simulation run then repeats the above process for all other contract elements in that set of contracts. The output of a single Monte Carlo run is simulated utilization of minority- and women-owned firms, by group, for that set of contract elements for that run.
- The Monte Carlo simulation is then repeated 1 million times for each set of contracts (1 million "runs" of the simulation).

The output of a Monte Carlo simulation is the number of runs out of 1 million that produce a result observed in the actual data. For state-funded contracts, none of the 1 million runs produced a level of overall MBE/WBE utilization that was equal to or below the actual utilization of 11.4 percent. However, for just Hispanic American-owned firms, about 150,000 of the 1 million simulation runs replicated a level of Hispanic American-owned firms of 6.6 percent or below.

BBC applied a 95 percent confidence level statistical standard, which is equivalent to a "two standard deviation test" sometimes applied by the courts when evaluating the statistical significance of the disparity results. Applying a two-tailed test, the maximum number of simulations that could equal or fall below actual utilization is 25,000 out of 1 million, or 2.5 percent of total simulation runs, for a result to found to be statistically significant. Because none of the 1 million simulation runs for MBE/WBEs were equal to or below actual utilization of 11.4 percent, the overall disparity for MBE/WBEs is statistically significant.

Results for state-funded contracts. Figure IV-16 presents results of these statistical significance tests for state-funded contracts. In addition to overall MBE/WBE utilization, BBC's Monte Carlo simulation rejected chance in contract and subcontract awards as an explanation of observed disparities on state-funded contracts for women-, African American-, and Asian-Pacific American-owned firms.

Lack of "statistical significance" in the disparity for Native American-owned firms for state-funded contracts must be interpreted with caution. The observed disparity is about the same as for MBE/WBEs overall (disparity index of 65). However, 20 percent of the Monte Carlo runs showed a level of utilization for Native American-owned firms at or below the 0.7 percent utilization found for these firms (0.7 percent utilization is equivalent to less than 1 cent out of every contract dollar). One of the reasons that the simulations showed that chance could not be rejected as an explanation for the disparity for Native American-owned firms is the small number of firms available for this work. There were relatively few chances for Native American-owned firms to be chosen for a contract element in the simulation due to the small number of Native American-owned firms. This is an issue with any statistical significance test for disparities involving small numbers. Some courts have recognized this issue when interpreting statistical results.

Figure IV-16.
Statistical significance of any observed disparities in MBE/WBE utilization for state-funded construction and engineering contracts, 2002-2006

				Reject chance in awards of contract elements as cause of disparity?
MBE/WBE	59	0	*	Yes
WBE	48	4	*	Yes
African American	15	149	0.01%	Yes
Asian Pacific American	31	713	0.07%	Yes
Subcontinent Asian American	125	n/a	n/a	n/a
Hispanic American	81	146,764	14.68%	No
Native American	65	198,160	19.82%	No

Note: Includes Caltrans and Local Assistance contracts. Utilization and availability includes non-DBE-certified firms.
*=less than one hundredth of 1 percent.

Source: BBC Research and Consulting.

Results for federally-funded contracts. BBC also performed Monte Carlo simulation analysis for federally-funded contracts before May 1, 2006, recognizing that these contracts typically had DBE subcontracting goals. BBC rejected chance in contract and subcontract awards as an explanation of observed disparities for African American-owned firms. Results for Hispanic American- and Subcontinent Asian American-owned firms are similar to state results. Figure IV-17 presents results for federally-funded contracts before May 1, 2006.

Figure IV-17.
Statistical significance of any observed disparities in MBE/WBE utilization for federally-funded construction and engineering contracts, 2002-April 2006

				Reject chance in awards of contract elements as cause of disparity?
MBE/WBE	83	39,748	3.97%	No
WBE	104	n/a	n/a	No
African American	25	2,977	0.30%	Yes
Asian-Pacific American	56	102,362	10.24%	No
Subcontinent Asian American	166	n/a	n/a	n/a
Hispanic American	91	216,989	21.70%	No
Native American	86	471,337	47.13%	No

Note: Includes Caltrans and Local Assistance contracts. Utilization and availability includes non-DBE-certified firms.

Source: BBC Research and Consulting.

Results for federally-funded contracts after May 1, 2006 are presented in Figure IV-18. Note that while none of the disparities are "statistically significant," the disparity indices for women-owned firms and Native American-owned firms were lower than reported in Figure IV-17. The lack of "statistical significance" is due in part to the number of contract elements analyzed for Figure IV-18 (192 total contract elements, compared with 6,673 for Figure IV-17).

Figure IV-18.
Statistical significance of any observed disparities in MBE/WBE utilization for federally-funded construction and engineering contracts, May-December 2006

				Reject chance in awards of contract elements as cause of disparity?
MBE/WBE	87	419,718	41.97%	No
WBE	54	255,275	25.53%	No
African American	26	398,116	39.81%	No
Asian-Pacific American	83	662,393	66.24%	No
Subcontinent Asian American	156	n/a	N/a	n/a
Hispanic American	141	n/a	N/a	No
Native American	0	45,924	4.59%	No

Note: Includes Caltrans and Local Assistance contracts. Utilization and availability includes non-DBE-certified firms.
Source: BBC Research and Consulting.

Summary

Key information from the DBE and MBE/WBE utilization analysis includes:

- Firms certified as DBEs obtained 9.0 percent of contract dollars for federally-funded contracts from 2002 through April 2006. Including MBE/WBEs not certified as DBEs, utilization was 14.7 percent. (Some of the MBE/WBEs that were not certified presumably could be DBE certified if they applied for the certification.)
- Minority- and women-owned firms that are not DBE-certified account for a substantial portion of total MBE/WBE utilization, especially for federally-funded contracts after May 1, 2006 and for state-funded contracts.
- Utilization of DBEs is substantially lower for contracts without DBE contract goals (federally-funded contracts after May 1, 2006 and state-funded contracts for 2002-2006).
- Total MBE/WBE utilization is lower on state-funded contracts (11.4 percent) than federally-funded contracts (14.7 percent).
- Based on limited data for May through December, 2006, MBE/WBE utilization declined little once Caltrans and local agencies discontinued DBE contract goals than found for 2002 through April 2006. It is not known whether this pattern continued after December 2006.
- Hispanic American- and white women-owned firms represent much of the total utilization of MBE/WBEs for both federally-funded and state-funded contracts.

From the overall disparity analysis, BBC concludes that:

- Even with DBE contract goals, there are overall disparities between MBE/WBE utilization and availability on federally-funded contracts (disparity index of 83). Disparities are relatively large for African American- and Asian-Pacific American-owned firms.

- For state-funded contracts, which did not have DBE contract goals, there were disparities for each group except for Subcontinent Asian American-owned firms (overall disparity index for MBE/WBEs of 59). Disparities were relatively large for WBEs and African American-, Asian-Pacific American and Native American-owned firms.

- Limited data are available on MBE/WBE utilization on federally-funded contracts awarded after Caltrans discontinued DBE contract goals. BBC's analysis suggests disparities for some MBE/WBE groups, but that overall levels of disparities for MBE/WBEs were about the same as found as for contracts prior to May 1, 2006. It is too early to determine whether overall MBE/WBE utilization on federally-funded contracts will remain at this level without DBE contract goals.

Appendix E provides considerable additional information concerning utilization of MBE/WBEs and certified DBEs on Caltrans, Local Assistance and SR 125 projects. Appendix E also analyzes MBE/WBE and DBE utilization for each Caltrans district.

SECTION V.
Construction Subcontracts

As discussed in Section IV, it is important to understand why overall disparities in utilization of minority- and women-owned firms may be occurring and to explore whether there may be neutral explanations for the disparities. This research can also identify potential remedies for any disparities, first considering measures that are race- and gender-neutral.

BBC combined qualitative and quantitative information to explore issues specifically related to construction subcontracting. Sections VI, VII and VIII analyze construction prime contracting, engineering subcontracting and engineering prime contracting, respectively.

Information on Subcontracting in the Transportation Construction Industry

The study team collected qualitative information concerning potential barriers to MBE/WBE participation as subcontractors in transportation construction contracts through interviews with minority-, women- and majority-owned firms, interviews with trade associations, review of oral and written public hearing testimony from individuals in this industry, and other sources. Appendix I describes this qualitative information in considerable detail.

Why many minority- and women-owned firms focus on subcontracting when pursuing public sector work. Many of the minority and women business owners completing in-depth interviews in this study reported that they often work as subcontractors. One interviewee reported that working as a subcontractor avoids many requirements such as bonding that they would need to deal with if they worked as a prime.

Some minority business owners indicated that prime contract work in the public sector is too large. One interviewee who works for Caltrans as a subcontractor reported favorably on other public sector agencies that break down contracts by category of work.

Section VI, which follows this section, describes barriers to participation as prime contractors in Caltrans and other public sector work these barriers to participation as prime contractors can push some firms into subcontractor roles on Caltrans projects.

Opportunities to submit price quotes on subcontracts. Compared with bidding as a prime contractor, there are relatively few requirements to bid and perform work as a subcontractor in the public sector or the private sector. For example, Caltrans has very few requirements concerning subcontractors on its projects and how subcontractors are selected:

- Subcontractors must have appropriate contractors licenses;
- Subcontractors must not be debarred from doing business with Caltrans;
- There are no requirements for subcontractors to provide their own bonding (the project needs to be bonded but all of the bonding can be provided by prime contractors); and
- Contract provisions between Caltrans and the prime contractor often flow down to subcontractors, and primes may put in additional conditions.

Except for meeting these types of requirements, prime contractors typically select subcontractors using their own methods. Prime contractors do not need to have open solicitation of subcontractors for price quotes, nor must they select the lowest bidder (or have a good reason not to do so). On Caltrans contracts, any such requirements related to DBE firms were discontinued after May 1, 2006. The small business subcontracting goals program that some state agencies apply for certain state-funded contracts is not implemented by Caltrans.

Methods to identify subcontracting opportunities. Caltrans published open bids and lists of planholders on its website. The planholders list identifies whether the firm has purchased a complete bid package or a non-bid package, which helps to distinguish between potential prime bidders and other firms. The planholders list includes phone numbers and fax numbers of potential prime contractors.

If subcontractors are familiar with Caltrans procedures and its website, it is easy to identify subcontracting opportunities and potential prime contractors. A number of subcontractors interviewed in this study gave positive feedback.

A few firms mentioned that they use subscription e-mail notification services or receive Green Sheet or other sources. Some primes reported paying to advertise in the Green Sheet to solicit bids from subs. Some firms indicated that other public agencies' notification systems were more effective (Metropolitan Water District and Los Angeles airport were examples).

Firms generally reported that is was easy to get plans and specs from Caltrans to be able to develop subcontractor quotes for primes.

One subcontractor interviewed in the study, however, said that he did not own or have easy access to computers so Internet listings of projects would not help him. Another interviewee was unaware of information on Caltrans' website. These barriers for certain firms were confirmed in interviews with trade associations. They urged Caltrans to continue advertising in trade papers and community and ethnic papers, and to consider other means of notification including mail, faxes, and e-mail.

Lists of potential subcontractors. Caltrans maintains a DBE directory and makes it available to prime contractors and others in both hard copy form and on the Caltrans website.

Caltrans has also attempted to develop a bidders list. It currently maintains a website that allows contractors to enter information about the firm. Relatively few firms have taken advantage of this opportunity. It is unclear how Caltrans uses the information on the bidders list. There appears to be no method for prime contractors to access this list if they are seeking subcontractors.

Prime contractors reported using the Caltrans DBE directory and other local agencies' directories to identify potential subcontractors.

Prime contractor solicitation of subcontractors for quotes. Prime contractors are currently under no obligation to solicit quotes from subcontractors for any federally-funded construction contracts. Disabled veteran business enterprise (DVBE) goals apply to state-funded contracts, which require certain actions on the part of prime contracts on any contract with DVBE goals.

Effect of the past DBE contract goals program. Although many MBE/WBE and majority contractors criticized Caltrans' former DBE contract goals program (as noted below), some said that the program created opportunities for minority- and women-owned firms that they would not have otherwise had. Some reported that the program gave DBEs the opportunity to prove the quality of their work to prime contractors.

Good faith efforts to meet goals. Prior to May 1, 2006, prime contractors were required to meet DBE goals on federally-funded contracts with goals or make good faith efforts to meet the goals. As reported in Appendix I, MBE/WBEs, trade associations and majority-owned firms were critical of the good faith efforts process.

Many firms reported that some prime contractors abused the good faith efforts process by soliciting firms for subcontract quotes at the last minute or by soliciting companies that did not perform relevant types of work or in the relevant geographic area. Referring to prime contractors, one minority business owner said, "They're much more interested in just making an initial contact so that they can record in their records that they did that, rather than actually being interested in receiving bids from minority contractors." A number of minority business owners reported that there is really no way for them to know whether prime contractors falsified their good faith efforts to utilize DBEs.

One white male contractor said that he did not know of any primes falsifying their efforts "because mostly the bigger companies really aren't planning on using the DBEs anyway."

Some majority-owned prime contractors have a different perspective. For example, one contractor noted that his company spent a lot of time soliciting bids from DBEs, but that it received few responses. He estimated that fewer than 10 percent of the businesses on the Caltrans DBE list were responsive when asked for quotes. Another contractor indicated that primes are less price competitive if they use DBE subs that have not submitted the lowest quotes. He said that it was unfair when a prime is the low bidder with only good faith efforts, beating out another prime that actually met the DBE goals.

Frequency of solicitations after DBE goals program discontinued. Some minority- and women-owned subcontractors report that they receive fewer solicitations for quotes from primes on contracts since Caltrans discontinued DBE goals on federally-funded contracts. Some MBE/WBEs reported no change (see Appendix I). Some majority contractors say that they used to choose a DBE that was not the low bidder for subcontracts on projects with goals but that now they can just take the low bidder.

Prime contractor use of DBEs listed on the project. One business owner said that, once the prime has subcontracted out the required minimum percentage of DBE work on a project, "that's as far as they go." Some MBE/WBEs said that they believed that primes had listed them on contracts and not used them.

One interviewee reported about prime contractors that just give subcontractors a check without the subcontractor actually doing any work. One white male subcontractor reported that he gets work from DBEs that had Caltrans subcontracts when they are unable to do the work.

Past Caltrans monitoring. Some MBE/WBE firms had positive comments about past Caltrans monitoring of good faith efforts and DBE utilization and some were critical.

Differences after Proposition 209. More MBE/WBE contractors had comments about a decline in solicitations for work after Proposition 209 passed than noted any change after Caltrans discontinued its subcontracting goals program.

Potential stigma of DBE certification. Some MBE/WBEs believe that primes and others may perceive DBE-certified firms as less qualified than firms that are not DBE certified.

One interviewee reported hearing comments that "DBE" was synonymous with "not qualified." Another interviewee said he heard firms refusing to work with a DBE. "They didn't realize I was there. A couple of prime firms were talking about there's no good DBEs around, you know, they can't perform."

Prompt payment. Some subcontractors to Caltrans construction projects reported that primes frequently paid rather slowly or on a dramatically delayed schedule. Such instances leave subcontractors in a "mercy" position relative to the prime contractor who is under contract with Caltrans.

Most who reported such difficulties with prompt payment from prime contractors further indicated that they perceived such issues as attributable to the prime contractors and not to Caltrans. In their experience, issues regarding payment are nearly, if not more, common within their private sector work.

A few firm owners and organizational leaders said that the problem of prompt payment to subcontractors is likely less common on public sector work, particularly when the project involves federal funding, because the contracting agency has the authority to withhold payment to the prime if they receive complaint about timely payment for subcontracted services.

Effect of DBE Contract Goals on Utilization

Reports from minority and women business owners that they do not have the same opportunities to participate as subcontractors without DBE contract goals are supported by BBC's analysis of projects with and without goals.

Federally-funded and state-funded subcontracts. BBC analyzed subcontracting dollars proposed at time of award for federally-funded and state-funded Caltrans, Local Assistance and SR 125 construction contracts. BBC examined about 5,300 subcontracts for federally-funded projects from January 2002 through April 2006 and about 3,300 subcontracts for state-funded contracts. In general, the subcontracts on pre-May 1, 2006 federally-funded contracts were affected by DBE contract goals. No Caltrans state-funded projects had goals and goals were generally not applied by local agencies on state-funded Local Assistance projects.

MBE/WBEs obtained 25 percent of subcontract dollars on projects without goals (state-funded projects), substantially less than the 39 percent of subcontract dollars for federally-funded contracts (with DBE goals).

Of the 25 percent MBE/WBE utilization for state-funded subcontracts, about three-quarters was for certified DBEs. DBE utilization was less on state-funded contracts than federally-funded contracts, as shown in Figure V-1.

Figure V-1.
MBE/WBE share of subcontract dollars for transportation construction contracts, federal vs. state funding

Note:

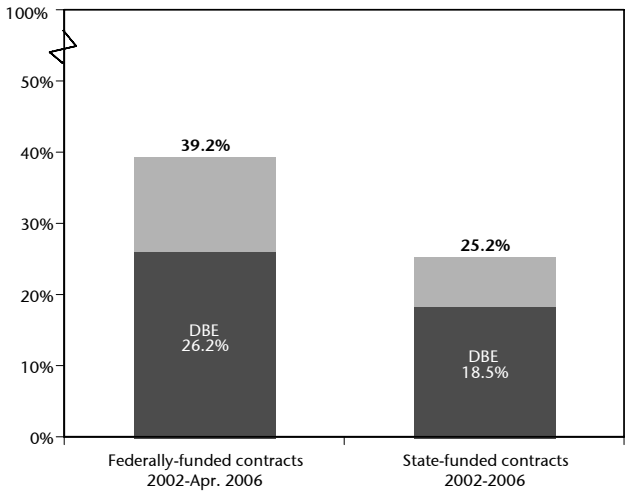
Statistics above each bar is total MBE/WBE utilization. Certified DBE utilization is noted in the bottom portion of each bar. The difference is utilization of MBE/WBEs that were not DBE certified.

For more detail and for results by MBE/WBE group, see Figures E-31 and E-72 in Appendix E.

Number of subcontracts analyzed is 5,297 for 2002-April 2006 federally-funded contracts and 3,279 for state-funded contracts.

Source:

BBC Research and Consulting from contract data on Caltrans, Local Assistance and SR 125 contracts.



Federally-funded subcontracts before and after May 1, 2006. BBC also compared MBE/WBE utilization on federally-funded contracts before and after the DBE contract goals program was discontinued. Prior to discontinuing the contract goals program, MBE/WBEs obtained 39 percent of the subcontract dollars on federally-funded contracts. MBE/WBE utilization fell to 27 percent of subcontract dollars for May through December 2006.

As shown in Figure V-2, DBEs received 26 percent of construction subcontract dollars before May 1, 2006 and 15 percent after May 1 2006.

Figure V-2.
MBE/WBE share of subcontract dollars for federally-funded transportation construction contracts, before and after May 1, 2006

Note:

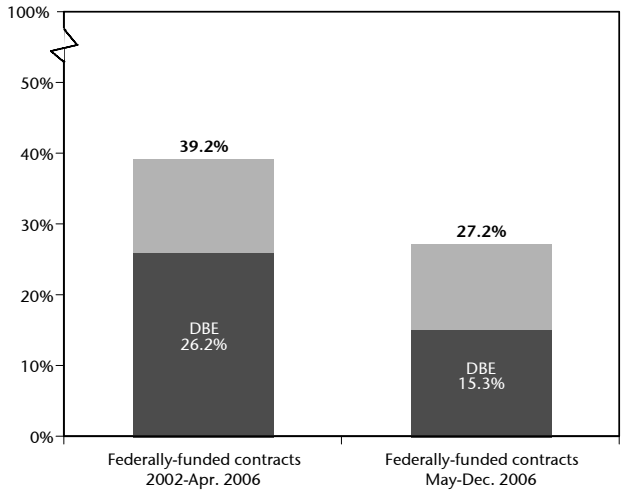
Statistics above each bar is total MBE/WBE utilization. Certified DBE utilization is noted in the bottom portion of each bar. The difference is utilization of MBE/WBEs that were not DBE certified.

For more detail and for results by MBE/WBE group, see Figures E-31 and E-32 in Appendix E.

Number of subcontracts analyzed is 5,297 for 2002-April 2006 and 148 for May-December 2006

Source:

BBC Research and Consulting from contract data on Caltrans, Local Assistance and SR 125 contracts.



Utilization of firms by race and gender group. Hispanic American-owned firms and white women-owned firms received the largest share of subcontract dollars on both federally-funded and state-funded contracts. On federally-funded contracts from 2002 through April 2006, 21 percent of all subcontract dollars went to Hispanic American-owned firms and 11 percent of subcontract dollars were awarded to WBEs. Utilization of Hispanic American and women-owned firms was lower for subcontracts after May 1, 2006 and on state-funded contracts.

Combined, utilization of all non-Hispanic MBEs was 8 percent of all subcontract dollars for federally-funded contracts prior to May 1, 2006 and 4 percent for subcontracts on state-funded projects. On federally-funded contracts after May 1, 2006, utilization of African American-, Asian-Pacific American- and Subcontinent Asian American-owned firms was higher than when projects had DBE subcontracting goals. However, these results are based on only 148 subcontracts on federally-funded projects for May through December 2006.

Figure V-3.
DBE and MBE/WBE share of subcontract dollars for transportation construction contracts, by race/ethnicity/gender

	Federally-funde		State-funded contracts 2002–2006
MBE/WBEs			
African American-owned	1.1%	3.7%	0.6%
Asian-Pacific American-owned	3.6	5.5	1.0
Subcontinent Asian American-owned	1.4	3.8	1.5
Hispanic American-owned	20.5	8.5	15.2
Native American-owned	1.4	0.0	1.2
Total MBE	28.1%	21.6%	19.7%
WBE (white women-owned)	11.1	5.6	5.5
Total MBE/WBE	39.2%	27.2%	25.2%
DBEs			
African American-owned	0.8%	3.7%	0.6%
Asian-Pacific American-owned	3.1	5.0	0.9
Subcontinent Asian American-owned	1.0	0.5	1.1
Hispanic American-owned	17.1	5.1	12.9
Native American-owned	1.4	0.0	1.1
Total MBE	23.3%	14.4%	16.6%
WBE (white women-owned)	2.8	0.9	1.9
White male-owned DBE	0.0	0.0	0.0
Total DBE	26.2%	15.3%	18.5%

Note: Numbers rounded to nearest tenth of 1 percent.
For more detail, see Figures E-31, E-32, and E-72 in Appendix E.
Number of subcontracts analyzed is 5,297 for 2002-April 2006 and 148 for May-December 2006 federally-funded contracts and 3,279 for state-funded contracts.

Source: BBC Research and Consulting from contract data on Caltrans, Local Assistance and SR 125 contracts.

Disparity Analysis

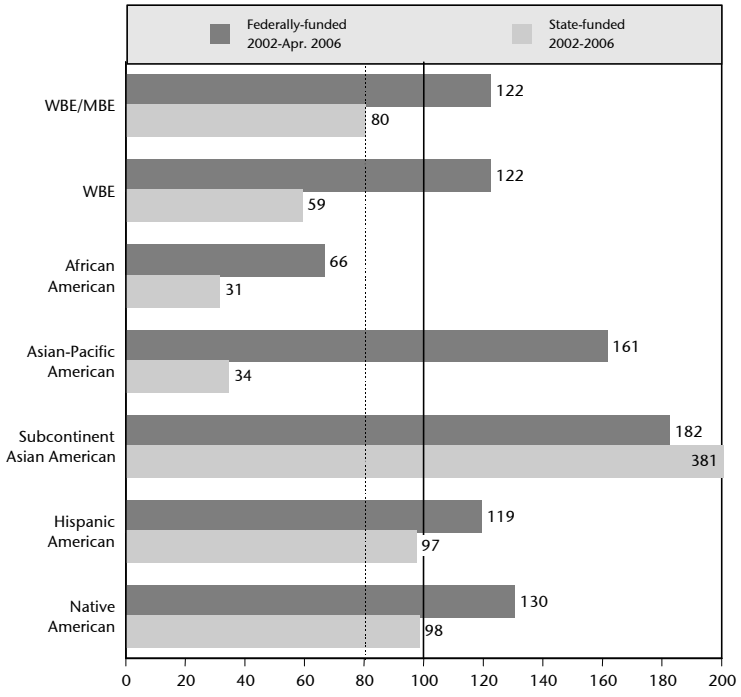
The conclusion that utilization of MBE/WBEs as subcontractors drops when projects do not have DBE contract goals does not necessarily mean that minority- and women-owned firms are at a disadvantage when competing for subcontracts. BBC performed a disparity analysis for construction subcontracts to determine the relative difference between MBE/WBE utilization and the availability of MBE/WBEs for these subcontracts.

Federally-funded and state-funded subcontracts. BBC's analysis shows that the 39 percent of subcontract dollars MBE/WBEs received for federally-funded construction contracts prior to May 1, 2006 exceeded what one would expect given the relative availability of MBE/WBE for the location, types and sizes of these projects. Figure V-4 presents these results. Utilization exceeded availability for each MBE/WBE group except for African American-owned firms.

However, on state-funded construction contracts MBE/WBEs overall received about 80 cents out of every subcontract dollar expected based on availability (disparity index of 80). There were substantial disparities for WBEs and African American- and Asian-Pacific American-owned firms. Utilization of Hispanic American- and Native American-owned firms closely matched what would be expected based on availability for these subcontracts and utilization of Subcontinent Asian American-owned firms substantially exceeded availability.

These results indicate that, without DBE contract goals, there are disparities in the utilization of African American-, Asian-Pacific American- and women-owned firms as subcontractors based on information from state-funded contracts.

Figure V-4.
Disparity indices for MBE/WBE utilization on federally- and state- funded transportation construction subcontracts, 2002-April 2006 and 2002-2006



Note:

Includes Caltrans, Local Assistance and SR 125 contracts. For more detailed information, see Figure E-31 and Figure E-72 in Appendix E.

Source:

BBC Research and Consulting.

One possible neutral explanation for these disparities is that minority- and women-owned firms were drawn to subcontracts on federally-funded contracts and away from participation on state-funded contracts because of the goals program for federally-funded projects. In other words, perhaps firms were "over-utilized" as subcontractors on federally-funded contracts and "under-utilized" on state-funded contracts, but on balance were utilized on par with relative availability across all of these contracts. In fact, the "over-utilization" of MBE/WBEs on federally-funded contracts more than makes up for the dollar amount of "under-utilization" on state-funded contracts. Combining participation on federally- and state-funded contracts, MBE/WBEs received more subcontract dollars than expected based on availability.

There are a number of arguments against this possible neutral explanation for disparities on state-funded contracts:

- Hispanic-owned firms demonstrate that one can be "over-utilized" in one set of contracts and perform what would be expected based on availability for another set of contracts (state-funded contracts);

- African American-owned firms were under-utilized for subcontracts on both federally- and state-funded contracts;

- Federally- and state-funded transportation construction work administered through Caltrans is only a portion of the transportation construction work in California (Caltrans does not "use up" the ability of minority- and women-owned firms to perform transportation contracting work); and

- As demonstrated in the next pages, without contract goals, utilization of MBE/WBEs as subcontractors falls below availability on federally-funded contracts.

Federally-funded subcontracts before and after May 1, 2006. Based on the 148 subcontracts BBC was able to examine for May through December 2006, overall MBE/WBE utilization on federally-funded contracts without DBE goals fell below what would be expected based on MBE/WBE availability. Expressed another way, MBE/WBEs received 85 cents of every expected subcontract dollar for the work involved in these subcontracts, only slightly higher than what was found, overall, for state-funded contracts.

BBC identified disparities for women-owned firms, Hispanic American-owned firms and Native American-owned firms for federally-funded construction subcontracts after May 1, 2006. Utilization exceeded availability for other MBE groups.

Because of the number of subcontracts examined (148), one must be cautious in interpreting results for May through December 2006, especially for individual MBE/WBE groups. For example, results for African American-, Asian-Pacific American-, Hispanic American- and Native American-owned firms differ from what was found for the much larger set of state-funded subcontracts.

Exhibit V-5.
Disparity indices for MBE/WBE utilization on federally-funded transportation construction subcontracts, 2002-April 2006 and May-Dec. 2006

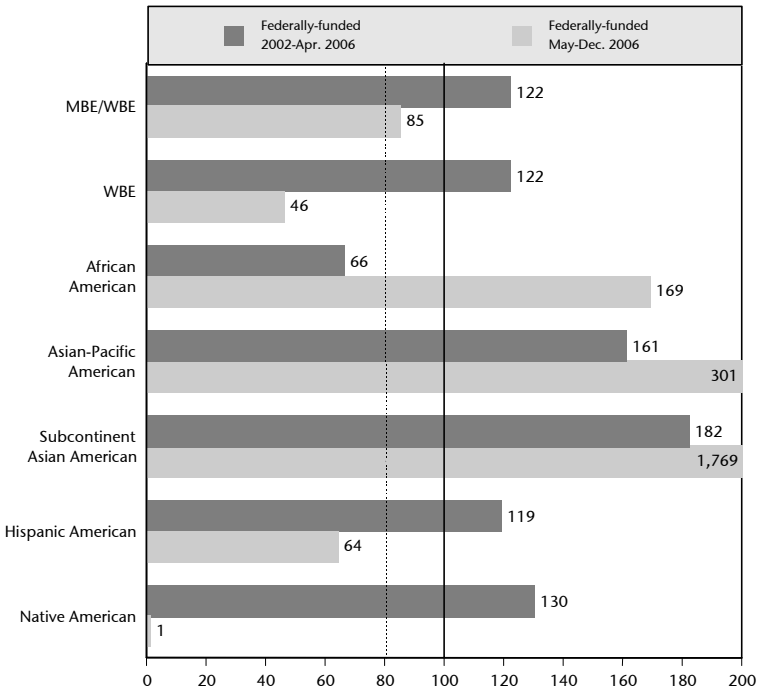
Note:

Includes Caltrans, Local Assistance and SR 125 contracts. For more detailed information, see Figure E-31 and Figure E-32 in Appendix E.

Number of subcontracts analyzed is 5,297 for 2002-April 2006 and 148 for May-December 2006

Source:

BBC Research and Consulting.



Participation of MBE/WBE Subcontractors in the Private Sector

Most minority- and female-owned firms conducting in-depth interviews in this study reported success in the private sector. Some report that a firm can build a business through qualifications and reputation, not just having to always have the lower prices. Some subcontractors report that the same prime contractors repeatedly use them. Prime contractors working in the private sector say that they use minority- and women-owned subcontractors. However, some minority- and women-owned firms reported difficulty receiving private sector work, as discussed in Appendix I.

BBC also examined quantitative information concerning subcontracting opportunities on private sector construction contracts. The Availability Survey, discussed in Appendix C, included questions concerning whether the firm had bid as a subcontractor on a private sector transportation project in the past five years:

- Except for African American-owned businesses, each group of transportation construction industry firms were more likely to have bid on private sector work than on Caltrans work. Appendix F provides more information concerning BBC's analysis of past attempts to obtain private sector subcontracts.

- Only a portion of the firms reporting bidding on private sector work were successful in obtaining that work. About 80 percent of majority-owned transportation construction industry firms that had bid on any private sector work (including subcontracts) were successful in receiving some work from this sector. The success rate of WBEs was slightly lower. MBEs pursuing private sector work were not as successful as majority-owned firms (see Appendix F). Disparities in success were especially large for African American-owned construction firms.

Summary

Overall utilization of minority- and women-owned firms as subcontractors on Caltrans construction projects dropped after Caltrans discontinued the DBE contract goals program on May 1, 2006. On state-funded projects, which did not have DBE goals, utilization of minority- and women-owned firms was lower than federally-funded projects with goals. A number of MBE/WBEs interviewed in this study reported fewer solicitations for subcontract bids after Caltrans discontinued the DBE contract goals.

There were disparities between overall MBE/WBE utilization and availability for Caltrans construction subcontracts without DBE goals.

Interviewees made a number of suggestions for additional neutral measures that could assist small and MBE/WBE businesses in obtaining subcontracts on Caltrans construction projects. These are further discussed in Section IX.

SECTION VI.
Construction Prime Contracts

Even though many small contractors and MBE/WBEs perform both subcontracts and prime contracts, and certain requirements such as construction licenses pertain to both sets of work, other barriers may apply when competing for prime contracts. Appendix F presents information indicating that a relatively small share of transportation construction firms compete for Caltrans prime contracts, and that this share is even smaller for minority- and women-owned firms. This section examines both qualitative and quantitative information related to construction prime contracting.

Qualitative Information on Prime Contracting in the Transportation Construction Industry

Based on public hearing testimony and interviews with minority and female business owners and trade association representatives, the study team identified several possible barriers to participation as prime contractors for transportation work.

Size of contracts. A number of contractors reported that Caltrans prime contracts are "extremely large." Even though these contractors work as a prime on smaller Caltrans projects and for other public and private sector clients, they must work as a subcontractor on the large Caltrans projects. One minority contractor said that the biggest problem with securing Caltrans work was that the agency failed to segment projects into small enough pieces for small and minority-owned businesses to compete for them.

Many of the firm owners who identified the size of contracts as a barrier to participation as a prime contractor, expressed concern that Caltrans avoided breaking-up contracts because the department preferred working with larger firms. One firm owner stated that larger firms are not held to the same standards as small firms "from the bid process on down to building."

Bonding. A number of contractors (MBE/WBE and majority-owned) reported that bonding is a major barrier to bidding on public work, including Caltrans projects. By state law, Caltrans is required to have bonding on construction contracts over $35,000.

One white male interviewee said that, because companies are required to bond their work in the public sector, he avoids public work. A minority contractor said that he does not work as a prime in the public sector because he cannot afford to bond his work. Another contractor said that he tried to work with Caltrans, but "when you are a small contractor, you can't really do it." Bonding was difficult for him. For some interviewees, Caltrans was closed to all but the largest contractors because of the bonding requirements. Among both prime contracting and subcontracting construction firms, many reported confusion about the bonding requirements placed upon subcontractors to Caltrans projects.

Very few firms reported difficulties in obtaining financing or bonding specifically due to their race, ethnicity or gender.

Other contract requirements and provisions. Insurance requirements and liquidated damages provisions can present barriers to bidding on Caltrans contracts. Several contractors reported that insurance requirements presented a barrier to bidding on Caltrans contracts. A trade association representative reported that recent changes to the insurance requirements increased the insurance premiums of several prime-contracting members by as much as 50 percent. Several contractors mentioned that insurance costs are a barrier to bidding on Caltrans work. In addition to costs, several firms reported that they were unable to obtain the level of insurance required for project elements and equipment. One prime contractor said that sometimes he can't bid on Caltrans work because the liquidated damaged provisions are excessive.

Paperwork and "red tape." Several contractors complained of a confusing, laborious process of bidding on Caltrans work. Some firms reported that the administrative burden discouraged them from bidding on Caltrans contracts. Several firms with past bid experience said that the Caltrans process is particularly difficult when compared with that of other public sector clients. Many firms complained of excessive paperwork.

Prevailing wage. Some interviewees reported difficulty complying with public sector rules and regulations including prevailing wage and certified payroll. Hiring union labor is also a barrier for some contractors.

Information on potential bids. As discussed in Section V, Caltrans construction contracts are well advertised and readily accessible on its website. Some contractors receive e-mail notification of Caltrans jobs. Some firms report that public sector jobs are better publicized than private sector jobs.

There was some feedback that the descriptions of Caltrans projects could be more detailed so firms would know whether or not to look more closely at the RFBs.

Several interviewees said that it was difficult to get questions answered over the phone at Caltrans. One business owner reported that the phone system was difficult to navigate. Another said that he tries to call for information, but no one ever gets back to him.

Other contractors (MBE/WBE and majority-owned) were unfamiliar with the Caltrans bidding process. Some indicated that they would like to work for Caltrans but they did not know how to go about doing so. Some believed that they should be notified about Caltrans jobs, and interpreted the fact that they had not as being denied the opportunity to bid work for Caltrans.

Payment. Some contractors report that they prefer to perform public sector contracts because they know they will be paid. Others complain about the waiting time for payments on public sector projects. One contractor said Caltrans was worse than the private sector and some firms complained specifically about slow pay by Caltrans. Another contractor specifically mentioned slow pay on Caltrans change orders.

Several contractors said there were problems with reimbursement for specific items of work on Caltrans projects. Some small business owners were affected by reported difficulty in receiving interim payment for long projects.

MBE/WBE Utilization as Prime Contractors

BBC examined utilization of minority- and women-owned firms as prime contractors on Caltrans and Local Assistance construction contracts. Analysis of dollars of utilization is based on dollars that appeared to be retained by the prime after BBC subtracted dollar amounts for each subcontractor identified for the project.

A number of people interviewed in this study said that they knew of very few DBEs working as prime contractors in the public sector, and several said they knew of none working as a prime for Caltrans. A number of minority and female prime contractors were interviewed as part of this study or testified at public hearings, however. BBC identified a few MBE/WBEs and certified DBEs working as prime contractors on Caltrans construction projects. However, relative to utilization on construction subcontracts (see Section V), minority- and woman-owned firms receive a far smaller share of Caltrans and Local Assistance prime contractor dollars.

Federally-funded and state-funded prime contracts. BBC analyzed utilization in dollars going to prime contractors for 831 federally-funded and 874 state-funded Caltrans, Local Assistance and SR 125 projects. In general, federally-funded projects were let with DBE contract goals, while those without federal funds did not specify any DBE goals.

As shown in Figure VI-1, MBE/WBEs received 4 percent of prime contract dollars on federally funded contracts for 2002 through April 2006. Among state-funded contracts, 7 percent of prime contract dollars were awarded to minority- and woman-owned firms. For both federally- and state-funded prime contracts, MBE/WBEs that were not DBE certified accounted for more contract dollars than firms certified as DBEs.

Figure VI-1.
MBE/WBE share of prime contract dollars for federally- and state-funded transportation construction contracts

Note:

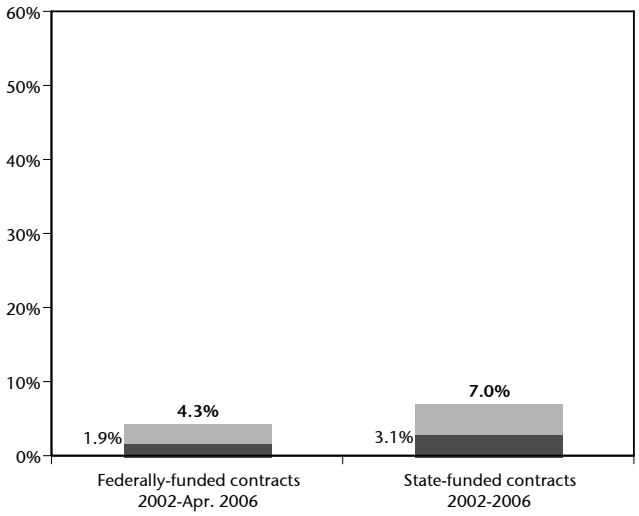
Statistics above each bar is total MBE/WBE utilization. Certified DBE utilization is noted in the bottom portion of each bar. The difference is utilization of MBE/WBEs that were not DBE certified.

For more detail and for results by MBE/WBE group, see Figures E-105 and E-71 in Appendix E.

Number of prime contracts analyzed is 831 for 2002-April 2006 federally-funded contracts and 874 for state-funded contracts.

Source:

BBC Research and Consulting from contract data on Caltrans, Local Assistance and SR 125 contracts.



Federally-funded prime contracts before and after May 1, 2006. BBC also analyzed MBE/WBE participation as prime contractors on 35 federally-funded contracts for May through December 2006 based on the information collected from Caltrans and local agencies. MBE/WBEs were awarded about 10 percent of prime contract dollars for this time period.

Note that the very small number of contracts for May through December 2006 limits any interpretation of this greater MBE/WBE participation as prime contractors.

Figure VI-2.
MBE/WBE share of prime contract dollars for federally-funded transportation construction contracts, before and after May 1, 2006

Note:

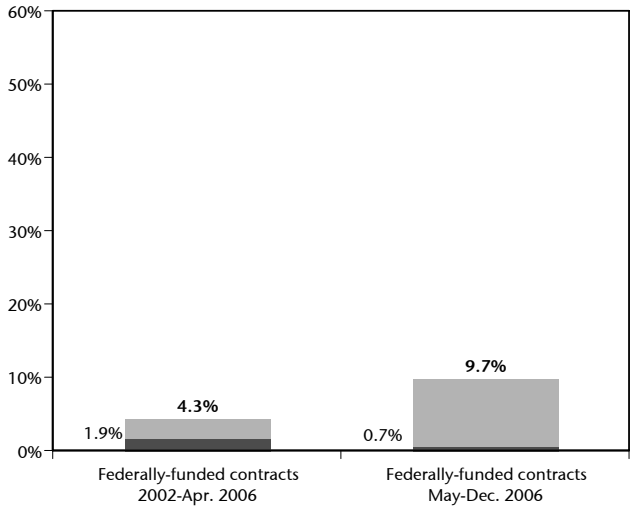
Statistics above each bar is total MBE/WBE utilization. Certified DBE utilization is noted in the bottom portion of each bar. The difference is utilization of MBE/WBEs that were not DBE certified.

For more detail and for results by MBE/WBE group, see Figures E-105 and E-106 in Appendix E.

Number of prime contracts analyzed is 831 for 2002-April 2006 and 35 for May-December 2006.

Source:

BBC Research and Consulting from contract data on Caltrans, Local Assistance and SR 125 contracts.



Utilization of firms by race and gender group. As with construction subcontracts, Hispanic American-owned firms and white women-owned firms accounted for the largest portion of MBE/WBE prime contract dollars. As shown in Figure VI-3 on the following page, this was true for both federally-funded contracts and state-funded contracts. Of the 35 federally-funded contracts analyzed for May through December 2006, two were awarded to WBEs and three were awarded to Hispanic-owned firms.

Figure VI-3.
DBE and MBE/WBE share of prime contract dollars for transportation construction contracts, by race/ethnicity/gender

	Federally-funde		State-funded contracts 2002–2006
MBE/WBEs			
African American-owned	0.4%	0.0%	0.2%
Asian-Pacific American-owned	0.1	0.0	0.4
Subcontinent Asian American-owned	0.3	0.0	0.2
Hispanic American-owned	1.2	7.4	4.2
Native American-owned	0.3	0.0	0.6
Total MBE	**2.2%**	**7.4%**	**5.6%**
WBE (white women-owned)	2.1	2.3	1.4
Total MBE/WBE	**4.3%**	**9.7%**	**7.0%**
DBEs			
African American-owned	0.4%	0.0%	0.1%
Asian-Pacific American-owned	0.1	0.0	0.2
Subcontinent Asian American-owned	0.0	0.0	0.2
Hispanic American-owned	1.0	0.7	1.9
Native American-owned	0.3	0.0	0.5
Total MBE	**1.9%**	**0.7%**	**2.9%**
WBE (white women-owned)	0.0	0.0	0.1
White male-owned DBE	0.0	0.0	0.0
Total DBE	**1.9%**	**0.7%**	**3.1%**

Note: Numbers rounded to nearest tenth of 1 percent.
For more detail, see Figures E-105, E-106, and E-71 in Appendix E.
Number of prime contracts analyzed is 831 for 2002-April 2006 and 35 for May-December 2006 federally-funded contracts and 874 for state-funded contracts.

Source: BBC Research and Consulting from contract data on Caltrans, Local Assistance and SR 125 contracts.

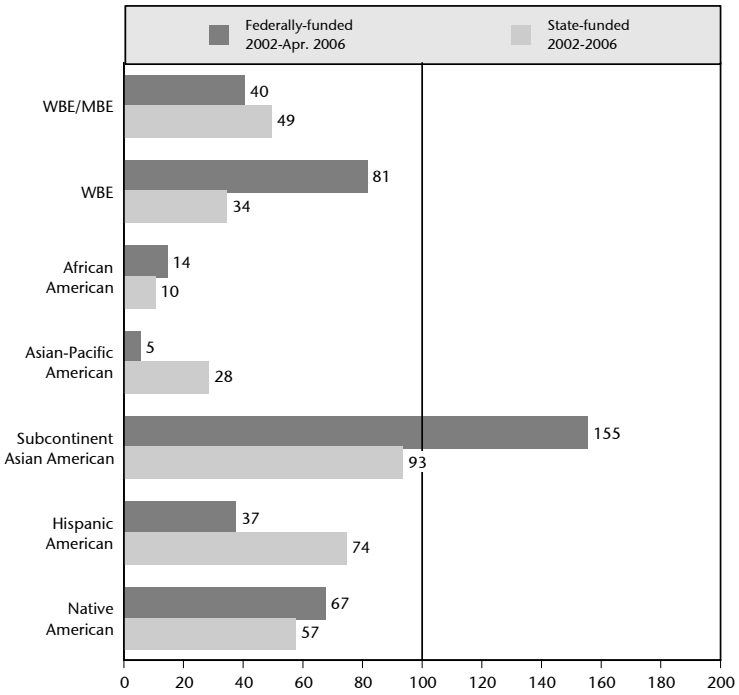
Disparity Analysis

There is clear evidence of substantial disparities between the utilization and availability of MBE/WBEs for the prime contracts examined in this study.

Federally-funded and state-funded prime contracts. Figure VI-4 reports disparity indexes by WBE/MBE group for federally- and state-funded prime contracts (Caltrans, Local Assistance and SR 125 construction projects). With the exception of firms owned and controlled by Subcontinent Asian Americans, minority- and woman-owned businesses are underutilized as prime contractors. Disparities were most severe for African American- and Asian-Pacific American-owned firms.

Utilization of Subcontinent Asian American-owned firms exceeded what would be expected from availability for both federally- and state-funded prime contracts.

Figure VI-4.
Disparity indices for MBE/WBE utilization on federally- and state- funded transportation construction prime contracts, 2002-April 2006 and 2002-2006



Note:

Includes Caltrans, Local Assistance and SR 125 contracts. For more detailed information, see Figure E-105 and Figure E-71 in Appendix E.

Number of prime contracts analyzed is 831 for 2002-April 2006 federally-funded contracts and 874 for state-funded contracts.

Source:

BBC Research and Consulting.

Federally-funded prime contracts before and after May 1, 2006. Because of the two prime contracts to WBEs and three prime contracts to Hispanic American-owned firms after May 1, 2006, overall MBE/WBE utilization as prime contractors on federally-funded contracts was in line with what would be expected based on overall MBE/WBE availability for these contracts.

Again, BBC cautions against drawing conclusions from the overall results for the 35 federally-funded prime contracts examined for May through December 2006 and for any results for specific MBE/WBE groups.

Figure VI-5. Disparity indices for MBE/WBE utilization on federally-funded transportation construction prime contracts, 2002-April 2006 and May-Dec. 2006

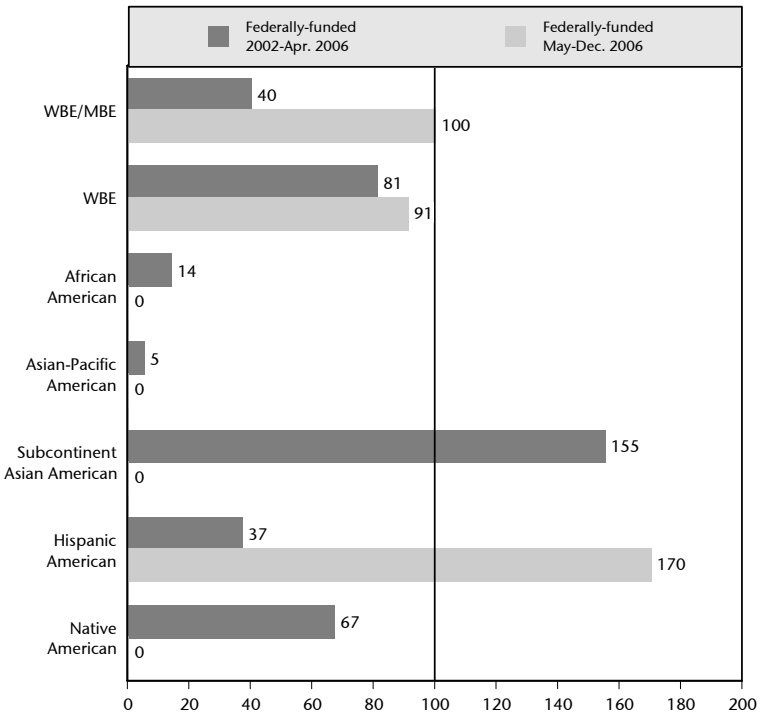
Note:

Includes Caltrans, Local Assistance and SR 125 contracts. For more detailed information, see Figure E-105 and Figure E-106 in Appendix E.

Number of prime contracts analyzed is 831 for 2002-April 2006 contracts and 35 for May-December 2006 contracts.

Source:

BBC Research and Consulting.



Results for Small Construction Prime Contracts

BBC further explored the effect of contract size on MBE/WBE participation by examining contracts under $10 million. Of the 1,527 Caltrans construction contracts analyzed, 93 were for amounts greater than $10 million. The remaining 1,434 contracts represented 36 percent of all Caltrans construction dollars awarded during the study period.

Overall, MBE/WBEs were awarded 6 percent of prime contract dollars for federally-funded construction contracts under $10 million. MBE/WBEs received 11 percent of prime contract dollars on state-funded contracts $10 million.

Even though the relative utilization of MBE/WBEs is higher, the level one would expect based on availability of MBE/WBEs for prime contracts of this size is also greater. Figure VI-6 presents the disparity indexes for this subset of prime contracts, which are, with small exceptions, comparable to those in Figure VI-4. Contract size, or at least examining contracts below $10 million, fails to explain the overall disparities for construction prime contracts.

Figure VI-6.
Disparity indices for MBE/WBE utilization on small federally- and state- funded transportation construction prime contracts, 2002-April 2006 and May-Dec. 2006

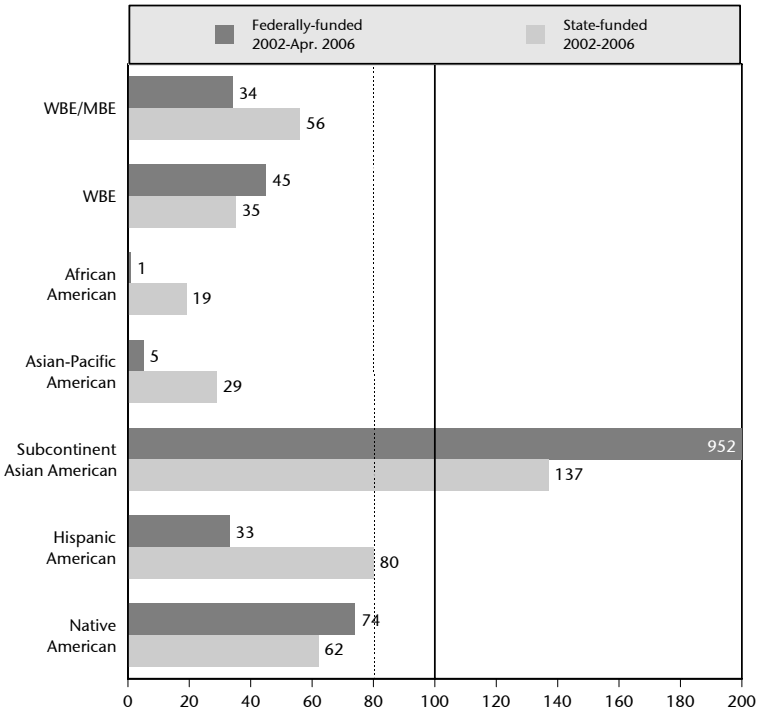
Note:

Includes Caltrans, Local Assistance and SR 125 contracts. For more detailed information, see Figure E- 114 and Figure E-115 in Appendix E.

Number of prime contracts analyzed is 734 for federally-funded 2002-April 2006 contracts; and 857 for state-funded 2002-2006 contracts.

Source:

BBC Research and Consulting.



Participation of MBE/WBEs in the Private Sector

As reported in Appendix F, transportation construction firms in all ownership categories, except for African American-owned firms, were more likely to report bidding in the private sector than for Caltrans projects. The total percentage of MBE/WBEs among all bidders to Caltrans projects is roughly equivalent to the MBE/WBE share of bidders to private sector transportation projects.

Private sector bid participation varies considerably across MBE/WBEs groups. Subcontinent Asian-American- (19 percent), majority- (17 percent) and women-owned (15 percent) firms are most likely to report bids as primes to private sector transportation construction work during the past five years. Slightly smaller percentages of Native American-, Asian-Pacific American- and Hispanic American-owned firms (roughly 10 percent of each group) report bidding as primes to private sector projects. Only 4 percent of African American-owned firms said that they had bid for private sector work as primes during the past five years.

Some minority and female business owners report success as prime contractors in the private sector. They report that private sector work is preferable because it is less price-driven and avoids the bureaucracy of public sector work. Private sector projects may be unbundled into smaller jobs that are more accessible for small businesses.

Other minority and female business owners say that they are not successful pursuing private sector work. One woman attributed her lack of success to developers and other companies using firms that they have worked with for a long time, having "no incentive … to switch." Some business owners report that they only do public sector work because they are union contractors, and it is difficult to compete on price with non-union firms in the private sector.

SECTION VII.
Engineering Subcontracts

Some of the issues identified for firms pursuing construction subcontracts, discussed in Section V, also pertain to engineering firms seeking subconsulting work. However, different processes apply for competing for engineering contracts, especially in the public sector. Small firms and minority- and women-owned firms may face different barriers in obtaining subcontracts on engineering contracts with Caltrans and other agencies.

Qualitative Information on Subcontracting in the Transportation Engineering Industry

The study team collected qualitative information concerning potential barriers to MBE/WBE participation as subcontractors in transportation engineering contracts through interviews with minority-, women- and majority-owned firms, interviews with trade associations, review of oral and written public hearing testimony from individuals in this industry, and other sources.

Minority- and women-owned firms focus on subcontracting when pursuing public sector work. Some MBE/WBE firm owners said that they worked as primes in the private sector and subconsultants on public sector work. Some firms indicated that they have to function as a subcontractor on Caltrans work because they are not large enough to compete as a prime (even they may do prime work for other clients). The barriers that force some firms to compete as subconsultants rather than as primes are discussed in Section VIII.

Opportunities to work as a subconsultant in public sector work. A few business owners reported difficulty receiving subcontractor work for transportation engineering. One minority business owner said he faced difficulty because of his company's size and the fact that there is an "old boy network" in place. He reported that prime contractors tend to want to use people that they are familiar with, which makes it difficult for him. Another minority firm owner said that primes only work with a select group of DBEs, so it is very difficult to convince primes to change their DBE partners.

Methods to identify subcontracting opportunities. Some firms reported difficulty finding engineering subcontracting opportunities. Unlike construction contracts, one interviewee reported that it is not easy to identify the engineering firms interested in a particular project. A trade association representative said that teams are already formed by the time Caltrans puts out an RFP. One female business owner said that Caltrans pre-proposal meetings are helpful because you can meet people and put your name on lists to show that you were interested in the project. She said that getting lists of primes expressing an interest in a project was useful.

Prime contractor solicitation of subcontractors for quotes. Prime contractors are currently under no obligation to solicit quotes from subcontractors for any federally-funded construction contracts. Disabled veteran business enterprise (DVBE) goals apply to state-funded contracts, which require certain actions on the part of prime contracts on any contract with DVBE goals.

Good faith efforts to meet goals. Prior to May 1, 2006, Caltrans formally encouraged DBE participation on engineering contracts. As with construction, many firms reported that some prime consultants abused the process. Some MBE/WBE firms reported that they are asked for information as "window dressing" and won't actually get any work. One minority female-owned business said that the company gets called two or three times a year to bid as a subcontractor on Caltrans work. "They ask you to submit your qualifications and we do and then that's the end of that." More information regarding the good faith process is available in Appendix I.

Frequency of solicitations after DBE goals program discontinued. Some minority- and women-owned firms indicated that primes used to request bids from their firms for subconsultant elements of Caltrans projects, but the number of requests decreased after the DBE goals program ended. One firm reported that the primes they used to work with now do more of the project work in-house.

Lists of potential subcontractors. Caltrans maintains a DBE directory and makes it available to prime contractors and others in both hard copy form and on the Caltrans website. As noted previously in this report, Caltrans has also unsuccessfully attempted to develop a bidders list.

Prime contractor use of DBEs listed on the project. The structure of the on-call contracts made it difficult to get DBEs involved in specific task orders according to one interviewee. He noted that there should be a way to enforce participation because a prime can say whatever they want when competing for the work and then not use subconsultants when they get a specific task order.

Differences after Proposition 209. As with construction subcontracts, some MBE/WBE firms had comments about a decline in solicitations for work after Proposition 209.

Insurance requirements. Although insurance was not mentioned as frequently among engineering subconsultants as it was among construction subcontractors, several businesses mentioned insurance requirements as a barrier for subconsulting work on engineering projects. One business reported that questions about insurance might arise during agreement negotiations at which point a subconsulting firm lacking the correct insurance might be dropped from the agreement.

Effect of DBE Contract Goals on Utilization

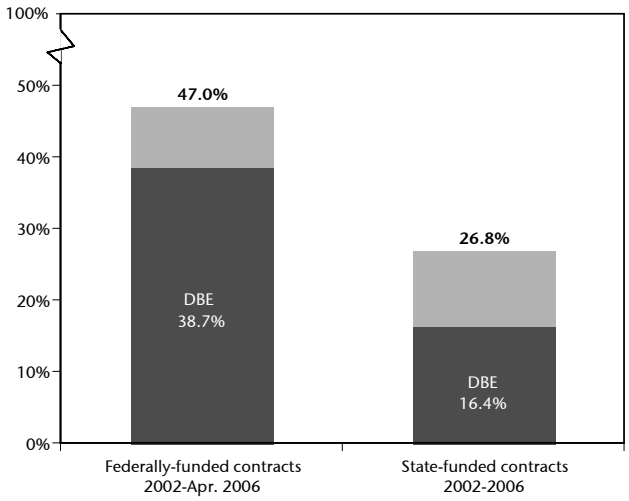
As observed for subcontracting opportunities on construction projects, MBE/WBE and DBE utilization for engineering subcontracts is affected by whether contracts specifies a DBE goal. One interviewee reported that, "we are only asked to be on the team if there are DBE requirements."

Federally-funded and state-funded subcontracts. To determine utilization, the study team collected invoice payment information for a large sample of engineering contracts (and in some Caltrans districts, received information on most or all contracts as discussed in Appendix D). BBC then analyzed utilization for 422 subcontracts from federally-funded contracts before May 1, 2006 and 113 subcontracts from state-funded contracts across the entire study period. Figure VII-1 reports the results of these analyses.

On federal contracts with goals, minority- and women-owned businesses receive nearly one-half of all subcontract dollars. More than four out of five dollars going to an MBE or WBE went to a certified DBE firm. On state-funded contracts (without goals), MBE/WBEs received 27 percent of total subcontracting dollars.

BBC also collected information on federally-funded engineering contracts between May and December 2006; however, there were too few subcontracts to examine any differences before and after May 1, 2006.

Figure VII-1.
MBE/WBE share of subcontract dollars for transportation engineering contracts, federal vs. state funding



Note:

Statistics above each bar is total MBE/WBE utilization. Certified DBE utilization is noted in the bottom portion of each bar. The difference is utilization of MBE/WBEs that were not DBE certified.

For more detail and for results by MBE/WBE group, see Figures E-107 and E-74 in Appendix E.

Number of subcontracts analyzed is 422 for 2002-April 2006 federally-funded contracts and 113 for state-funded contracts.

Source:

BBC Research and Consulting from contract data on Caltrans, Local Assistance and SR 125 contracts.

Utilization of firms by race and gender group. Analysis of utilization by MBE/WBE group for engineering subcontracts (see Figure VII-2) reveals different patterns by group. Women- and Asian-Pacific American-owned firms received similar proportions of subcontracting dollars on engineering projects with and without DBE goals. African American- and Native American-owned firms received consistently small proportions of total subcontracting dollars for engineering services, regardless of whether they had DBE goals.

The difference in utilization with and without DBE contract goals is most stark for Hispanic American-owned and Subcontinent Asian American-owned firms. Subcontinent Asian American-owned firms received 12 percent of subcontract dollars on federally-funded contracts and only 1 percent of subcontract dollars on state-funded contracts.

Hispanic American-owned firms received 15 percent of subcontract dollars for federally-funded contracts and only one-half that share of subcontract dollars for state-funded contracts.

Similar patterns were found when analyzing utilization of DBEs by race, ethnicity and gender (also in Figure VII-2).

Figure VII-2.
DBE and MBE/WBE share of subcontract dollars for transportation engineering contracts, by race/ethnicity/gender

Note:

Numbers rounded to nearest tenth of 1 percent.

For more detail, see Figures E-107 and E-74 in Appendix E.

Number of subcontracts analyzed is 422 for 2002-April 2006 federally-funded contracts and 113 for state-funded contracts.

Source:

BBC Research and Consulting from contract data on Caltrans, Local Assistance and SR 125 contracts.

		State-funded contracts 2002–2006
MBE/WBEs		
African American-owned	2.0%	1.4%
Asian-Pacific American-owned	9.3	7.3
Subcontinent Asian American-owned	11.8	1.1
Hispanic American-owned	14.5	6.9
Native American-owned	0.1	0.6
Total MBE	**39.5%**	**17.4%**
WBE (white women-owned)	7.5	9.4
Total MBE/WBE	**47.0%**	**26.8%**
DBEs		
African American-owned	1.9%	0.1%
Asian-Pacific American-owned	8.4	8.0
Subcontinent Asian American-owned	11.1	1.2
Hispanic American-owned	11.9	2.1
Native American-owned	0.0	0.2
Total MBE	**33.4%**	**11.7%**
WBE (white women-owned)	5.1	4.7
White male-owned DBE	0.0	0.0
Total DBE	**38.7%**	**16.4%**

Disparity Analysis

The overall rate at which MBE/WBEs are utilized as subconsultants exceeds the expected level given availability for the sample of federally-funded engineering contracts. For contracts without DBE goals (state-funded contracts), MBE/WBE utilization is only 74 percent of the level expected for these subcontracts.

Federally-funded and state-funded subcontracts. Figure VII-3 presents the results of disparity analysis for subcontracts on both federally- and state-funded engineering contracts. As shown, Native American-owned firms experienced the greatest disparities of any ownership group (for example, only 7 cents of every expected subcontracting dollar on contracts with DBE goals). Hispanic American- and Subcontinent Asian-owned firms received two- and three-times more subcontracting dollars than expected for federally-funded contracts but only obtained two-thirds and one-third of their expected utilization for state-funded contracts, respectively. Utilization of African American- and women-owned firms fell below availability for both federally- and state-funded contracts. Utilization of Asian-Pacific American-owned firms was similar to what would be expected based on availability of these firms for engineering subcontract work.

Figure VII-3.
Disparity indices for MBE/WBE utilization on federally- and state- funded transportation engineering subcontracts, 2002-April 2006 and 2002-2006

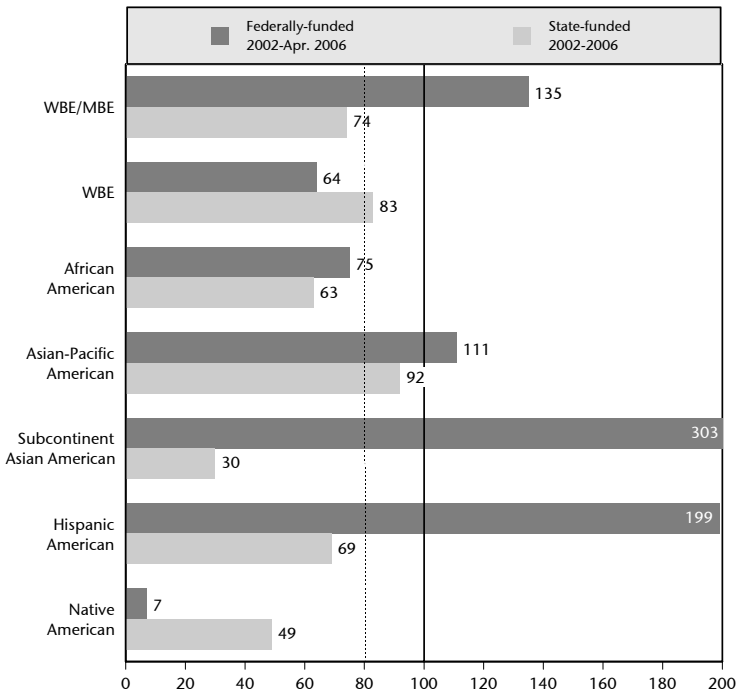
Note:

Includes Caltrans, Local Assistance and SR 125 contracts. For more detailed information, see Figure E-107 and Figure E-74 in Appendix E.

Number of subcontracts analyzed is 422 for 2002-April 2006 federally-funded contracts and 113 for state-funded contracts.

Source:

BBC Research and Consulting.



Participation of MBE/WBEs in the Private Sector

Some women and minority firm owners reported preferences for working in the private sector, most frequently because payment tends to be more timely than on government projects. Work in the private sector requires considerable effort early in a firm's lifecycle, but once a firm establishes relationships through work with more established firms and begins to develop its own reputation, work tends to follow without the effort involved in preparing and submitting a statement of qualifications. A few firms that work primarily as subconsultants suggested that private sector contracts are more likely to be unbundled, allowing them to compete for smaller or more specialized elements of a larger project.

As discussed in Appendix F, one-half of majority-owned transportation engineering firms had proposed as prime or subconsultants on private sector work in the past five years. This was higher than MBEs and WBEs, except for Native American-owned firms. For most groups, MBEs were somewhat less likely than majority-owned firms to have bid as subconsultants on private sector work. WBEs were far less likely to bid as subconsultants on private sector work than majority-owned firms (20 percent versus 30 percent).

SECTION VIII.
Engineering Prime Contracts

Unlike construction prime contracts, Caltrans and other public agencies typically select prime consultants for engineering contracts based on qualifications. This presents a different set of potential barriers to MBE/WBE and small business participation as prime consultants on engineering-related work.

Overview of Solicitation Procedures

With the exception of on-call or emergency agreements, Caltrans typically solicits statements of qualifications (SOQs) for projects overseen within its Consultant Services Division. The process begins with the publication of a request for qualifications. Firms usually have a few weeks to prepare and submit their statements after this announcement.

A panel of contract engineers at the corresponding district office reviews each statement, and the average of the weighted scores from each reviewer gives an overall rating. The three firms with the highest rank comprise a "short list." These short-listed firms must submit sealed cost proposals and are invited for evaluation interviews, at which time the review panel applies a similar set of weighted scoring criteria. At the close of reviews, the Department selects the top firm, opens that firm's cost proposal and enters rate negotiations. The contract manager continues down the list if they are unable to agree upon a set of rates with the top firm. The other firms' cost proposals remain unopened until the Department has selected them for negotiations.

Qualitative Information on Prime Contracting in the Transportation Engineering Industry

The study team's review of Caltrans' selection processes and interviews with businesses owners identified a number of barriers to obtaining work as a prime consultant.

Requirements to propose as a prime consultant. Caltrans requires that a firm have the relevant professional licenses to perform engineering-related work. This license requirement is typical of most public sector agencies.

Information on requests for proposals. According to the Division of Procurement and Contracts (DPAC) website, the Department must announce a new request for qualifications (RFQ) via publication in a relevant industry or trade journal with statewide circulation or electronic posting on a site with demonstrated statewide accessibility that is maintained by a professional organization representing firms in the relevant industry. The DPAC site further specifies that the failure of a professional society or trade journal to publish the announcement is not grounds to rescind the contract or re-issue the request.

Interviewees reported that this formal notice procedure is open, but that larger firms know about the project ahead of time due to their marketing efforts. One interviewee indicated that response times are short, so this informal advanced notice helps the larger firms. One interviewee noted that Caltrans posts a "contract look-ahead," but that it is not very accurate.

Assessment of qualifications when competing for Caltrans work. In contrast to prime contracts for construction projects, where a low bid rule determines the award of contract, Caltrans selects firms for engineering-related contracts based on qualifications. Each firm reports qualifications in a formal statement to the district contract staff; this statement enumerates a firm's previous experience on projects of similar scope and size and contains resumes for key personnel that will manage and assist project execution. The rating scheme used for the criteria, in addition to the size and experience criteria, potentially create barriers for small businesses attempting to successfully bid as a prime contractor. Some contractors also mentioned that proximity to Caltrans offices and familiarity with staff are important for winning contracts.

Criteria and weighting scheme. The determination of a short list of firms for interview is based upon review of these statements for a narrow range of criteria (scores on these criteria are weighted by a factor of 1 to 3, as indicated in parentheses): professional excellence (3), personnel experience and education (2), staffing capability and workload (2), relevance of recent work (2) and feasibility of oversight (1).

Given this weighting scheme, some firm owners said that evaluations favor firms with larger and highly-educated staff and stronger financial resources to manage multiple projects. In reviewing SOQs for past engineering bid opportunities, the study team discerned that higher scores went to firms with better organized and more professional-looking statements.

Short-listed firms are invited for interview, and their conduct and response to these interviews are subject to weighted scoring for (scores on these criteria are weighted by a factor of 1 to 3, as indicated in parentheses): personnel qualifications (2), firm capabilities (3), project understanding and approach (3), feasibility of oversight (1) and the quality of solicited references (1). The study team was unable to determine patterns in this stage of review because numeric score cards were the only remaining record of these oral presentations for the contracts reviewed.

Size and experience requirements. Many firm owners interviewed in the study or who testified at the public hearings indicated a "Catch-22" where firms needed Caltrans experience to be selected as a prime consultant but could not obtain that experience without winning this work. Some interviewees said that it was difficult to get work with Caltrans because district staff likes to work with firms they know. One interviewee reported that small businesses do not have the resources to do the necessary marketing to Caltrans. A minority business owner said that his company has not had success with Caltrans projects, in contrast with other public agencies, because Caltrans has a strong preference for large, internationally prominent firms. He reported a strong bias against smaller local businesses.

One minority firm owner said that their firm usually just works as a subconsultant for Caltrans because Caltrans places a heavy emphasis on the size of the firms it selects, which shut his firm out of prime contracting opportunities. His larger competitors were not only able to get the work, but also to build skills in areas where they previously had no expertise.

A trade association representative said, "The perception is that if you are a smaller firm or a DBE firm, you won't have the horsepower that Caltrans is looking for to take on a lot of these contracts. Even though you may have the right people at the right time, the perception is that if you don't have four times as many people as the contract might need, you're not going to be considered for it."

One interviewee reported that, in the private sector, firms may be selected based on the capabilities and experience of both the company itself and its personnel, but in the public sector, firm experience is the dominant factor. This may make it difficult for small businesses to get the necessary experience that will win it work in the public sector.

Proximity and familiarity. Many owners of engineering firms complained about limited opportunity to win public sector prime contracts in general. Some report that their proposals are not seriously considered because public sector managers are not familiar with their companies or that large firms are favored. Some interviewees reported that staff of public agencies have the misperception that DBE firms are not qualified to do the work.

Other firm owners mentioned that Caltrans sometimes takes the physical proximity of the contractor's office into consideration. As this has little genuine bearing on a firm's qualification for a project, these firms perceived such location requirements as unfairly biased against firms who do not have offices in such places as downtown Oakland or Los Angeles.

Paperwork and administrative requirements. Several firms noted the complexity of the Caltrans selection process and commented on the amount of time required to complete the bidding process. An added difficulty for professional service firms working with Caltrans is the federally-mandated audit of contracts and accounting procedures. This potentially affects the bid and payment process as a firm may go over a year under agreement without any clear indication of how much overhead and profit they might receive for their work.

Negotiated rates. Several firms that have submitted qualification for Caltrans engineering projects in the past reflected their increasing disinterest in bidding due to the standard rates imposed by Caltrans. Some indicated that the standard rates have not kept current with the increased costs for fuel and other materials. Another female business owner questions, "Why would I work on a job for Caltrans at $64 an hour when I can take the same guy and charge him out at $95 an hour and work for AT&T." Many other professional service providers shared similar experience in the relative earning potential on Caltrans contracts compared to what they are able to earn in the private sector.

Prompt payment. Very few prime consultants reported negative experiences with receiving accurate and timely payments for invoices submitted to Caltrans. A somewhat common frustration, however, was the close inspection and requests for detailed expenses that often followed the submission of invoices. One firm owner said that Caltrans invoicing staff require every item submitted to be "dotted and crossed."

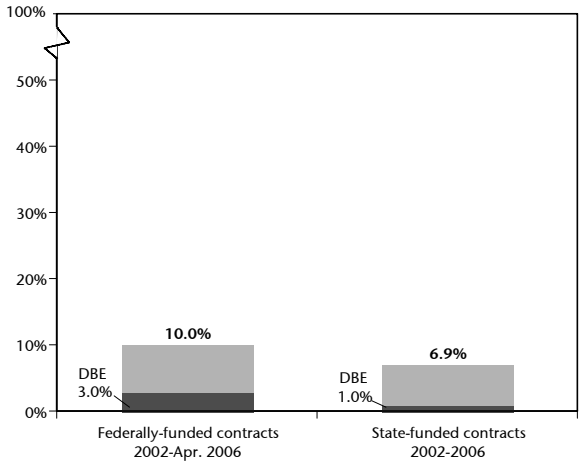
MBE/WBE Utilization as Prime Consultants

BBC examined utilization of minority- and women-owned firms as prime consultants to Caltrans and Local Assistance engineering and professional service projects. These analyses are based on reported invoice payments for a sample of Caltrans agreements and on award and payment information for a sample of local agency projects funded with grants from Caltrans.

MBE/WBE and DBE utilization on prime contracts for engineering-related services are higher than the comparable rates of utilization for construction-related prime contracts for Caltrans, Local Assistance and SR 125.

Federally-funded and state-funded prime contracts. The final sample of engineering-related prime contracts included 123 federally-funded contracts from 2002 to April 2006, and 39 state-funded contracts for the entire study period. MBE/WBEs received 10 percent of prime contract dollars for federally-funded contracts and 7 percent of prime contract dollars for state-funded contracts. DBEs received 3 percent and 1 percent of prime contract dollars on these respective prime contract types.

Figure VIII-1.
MBE/WBE share of prime contract dollars for transportation engineering contracts, federal vs. state funding



Note:

Statistics above each bar is total MBE/WBE utilization. Certified DBE utilization is noted in the bottom portion of each bar. The difference is utilization of MBE/WBEs that were not DBE certified.

For more detail and for results by MBE/WBE group, see Figures E-108 and E-73 in Appendix E.

Number of prime contracts analyzed is 123 for 2002-April 2006 federally-funded contracts and 39 for state-funded contracts.

Source:

BBC Research and Consulting from contract data on Caltrans, Local Assistance and SR 125 contracts.

Utilization of firms by race and gender group. BBC also explored the share of prime contract dollars going to each MBE/WBE group for federally- and state-funded engineering-related contracts. Figure VIII-2 shows that women-owned firms account for nearly all of the dollars going to MBE/WBEs on both contract types. No prime consultant dollars for state-funded engineering services went to minority-owned firms. Only 3 percent of prime contracting dollars for federally-funded engineering services went to minority-owned firms, primarily Subcontinent Asian American- and Hispanic American-owned firms. Among the 39 state-funded prime contracts, only WBEs received prime work.

Figure VIII-2. DBE and MBE/WBE share of federally- and state-funded prime contract dollars for transportation engineering contracts, by race/ethnicity/gender

Note:

Numbers rounded to nearest tenth of 1 percent.

For more detail, see Figures E-108 and E-73 in Appendix E.

Number of prime contracts analyzed is 123 for 2002-April 2006 federally-funded contracts and 39 for state-funded contracts.

Source:

BBC Research and Consulting from contract data on Caltrans, Local Assistance and SR 125 contracts.

		State-funded contracts 2002–2006
MBE/WBEs		
African American-owned	0.0%	0.0%
Asian-Pacific American-owned	0.5	0.0
Subcontinent Asian American-owned	1.4	0.0
Hispanic American-owned	1.2	0.0
Native American-owned	0.0	0.0
Total MBE	**3.1%**	**0.0%**
WBE (white women-owned)	6.9	6.9
Total MBE/WBE	**10.0%**	**6.9%**
DBEs		
African American-owned	0.0%	0.0%
Asian-Pacific American-owned	0.2	0.0
Subcontinent Asian American-owned	1.4	0.0
Hispanic American-owned	0.7	0.0
Native American-owned	0.0	0.0
Total MBE	**2.4%**	**0.0%**
WBE (white women-owned)	0.6	1.0
White male-owned DBE	0.0	0.0
Total DBE	**3.0%**	**1.0%**

Disparity Analysis

Although MBE/WBE utilization on engineering prime contracts is larger than the rate at which minority- and women-owned businesses receive construction prime contract dollars, MBE/WBEs received only a portion of the prime contracting dollars expected.

Federally-funded and state-funded prime contracts. Overall, MBE/WBE utilization on prime contracts is lower for state-funded engineering contracts than for federally-funded contracts. MBE/WBEs received 45 cents of every expected dollar of prime contracts funded with federal money. About 27 cents of every dollar expected of state-funded prime contracts went to MBE/WBEs.

The disparities in MBE utilization on engineering prime contracts are clearly most pronounced for state-funded contracts, where minority-owned firms did not receive any of the 39 prime contracts. The disparities are also large when examining MBEs utilization on federally-funded prime contracts.

In contrast, utilization of women-owned prime consultants exceeded availability on federally-funded engineering contracts. WBE utilization on state-funded engineering prime contracts was 82 percent of expected utilization.

Figure VIII-3.
Disparity indices for MBE/WBE utilization on federally- and state- funded transportation engineering prime contracts, 2002-April 2006 and 2002-2006

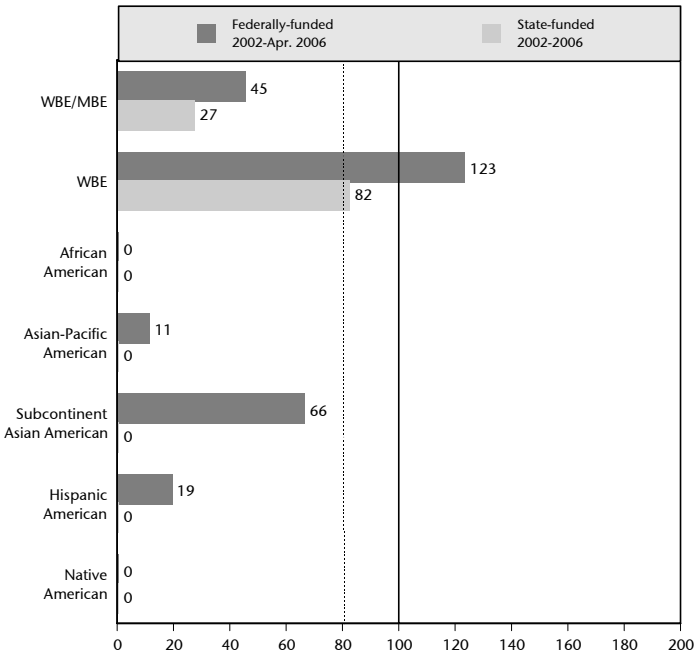
Note:

Includes Caltrans, Local Assistance and SR 125 contracts. For more detailed information, see Figure E-108 and Figure E-73 in Appendix E.

Number of prime contracts analyzed is 123 for 2002-April 2006 federally-funded contracts and 39 for state-funded contracts.

Source:

BBC Research and Consulting.



BBC conducted separate disparity analyses of engineering prime contracts at or below a dollar threshold of $500,000 to determine if utilization for these contracts might be more comparable to the availability of minority- and women-owned firms for the locations, types and sizes of work comprising these smaller projects. The results reported in Figure VIII-4 indicate even greater disparities between utilization and availability for all MBE/WBE groups on these smaller prime contracts than observed for the full universe of prime contracts discussed in the previous analyses. Relative to their availability, MBE/WBEs fare no better at obtaining work on smaller prime contracts for engineering services than they do at securing their share of prime contract dollars on larger projects.

Figure VIII-4.
Disparity indices for MBE/WBE utilization on federally- and state- funded transportation engineering prime contracts under $500K, 2002-April 2006 and 2002-2006

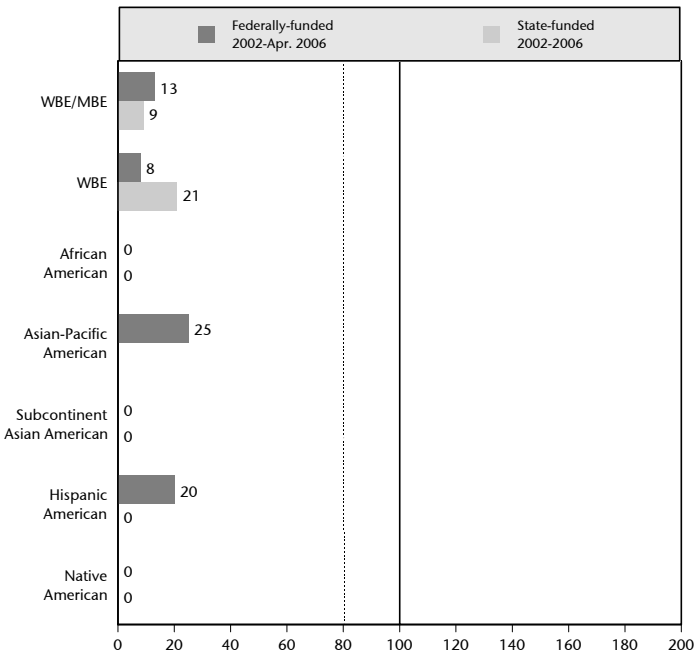
Note:

Includes Caltrans, and Local Assistance contracts. For more detailed information, see Figure E-122 and Figure E-123 in Appendix E.

Number of prime contracts analyzed is 54 for 2002-April 2006 federally-funded contracts and 25 for state-funded contracts.

Source:

BBC Research and Consulting.



Participation of MBE/WBEs in the Private Sector

Many minority- and women-owned engineering firms reported success working as prime consultants in the private sector. These same firms often are limited to subcontracts for public sector work.

However, as discussed in Appendix F, survey data indicate that MBEs and WBEs are les likely to compete for private sector prime contracts when compared with majority-owned firms (with the exception of Native American-owned firms and firms owned by Subcontinent Asian Americans).

SECTION IX.
Neutral Remedies

The study team reviewed neutral remedies in five broad categories:

- Business outreach and communication;
- Technical assistance;
- Access to capital;
- Contracting practice improvements; and
- Data collection, tracking and reporting.

These categories incorporate the ten specific neutral elements for the implementation of a race-neutral Federal DBE Program outlined in 49 CFR Part 26. Figure IX-1, on page 2, summarizes each element and sub-element and the corresponding category of recommendation that addresses it.

Some of these recommendations may require changes in contracting procedures that can only be accomplished though new state law. Certain initiatives would also require significant additional resources. The initiatives discussed in this section are examples of what Caltrans might consider and are not exhaustive of possible neutral measures.

Business Outreach and Communication

A consistent theme in all of the interviews with small businesses—and especially those located in more rural areas of the state or with limited technological capacity—was the shortage of information available to them about how to bid and work on Caltrans projects. Many small businesses are unaware of places to learn about bidding opportunities, how to identify and connect with potential prime contractors, and about the general procedures for bidding on and completing Caltrans contracts.

Consistent with the September 21, 2006, directive from Director Kempton, the study team recommends multiple outreach and communication strategies to improve small businesses' awareness of bidding opportunities and procedures. These should be considered supplemental to existing strategies, including the publication and distribution of the annual Caltrans Quick Reference for Contractors, which provides useful information but is relatively unknown to many of the businesses with whom the study team spoke.

Notice of opportunities. Caltrans provides information about contracting and subcontracting opportunities on its website. Caltrans could make further efforts to educate contractors and subcontractors on how to locate and use this information.

Figure IX-1.
Neutral Remedies in 49 CFR Part 26

Remedies	Neutral Program	Construction		Engineering	
		Primes	Subs	Primes	Subs
1. Change contracts to facilitate DBE and other small business participation					
a. Arrange solicitation and times to facilitate small business participation	Contracting Process Improvements	●		●	
b. Arrange quantities and delivery schedules to facilitate small business participation	Contracting Process Improvements	●		●	
c. Arrange specifications and other requirements to facilitate small business participation	Contracting Process Improvements	●	●	●	●
d. Encourage primes to subcontract work that they otherwise might perform with their own forces	Contracting Process Improvements		●		●
2. Provide assistance in obtaining bonding and financing					
a. Simplify bonding process	Access to Capital	●			
b. Reduce bonding requirements	Contracting Process Improvements	●			
c. Eliminate the impact of surety costs from bids	Contracting Process Improvements	●			
d. Provide services to small businesses to obtain bonds	Financial Assistance	●			
e. Provide services to small businesses to obtain financing	Technical Assistance	●	●	●	●
3. Provide technical assistance and other services	Technical Assistance				
4. Carry out information and communications programs					
a. Provide information on contract procedures	Business Outreach & Communications	●		●	
b. Provide information on specific contract opportunities	Business Outreach & Communications	●	●	●	●
c. Disseminate information to prime contractors on potential subcontractors	Business Outreach & Communications		●		●
d. Provide information in languages other than English where appropriate	Business Outreach & Communications	●	●	●	●
5. Implement a supportive services program					
a. Develop business management capability	Technical Assistance	●	●	●	●
b. Develop record keeping and financial and accounting capability	Technical Assistance	●	●	●	●
6. Provide services to achieve long-term development and self-sufficiency					
a. Improve long-term development	Technical Assistance	●	●	●	●
b. Increase opportunities to participate in a variety of kinds of work, have increasingly significant projects and achieve eventual self-sufficiency	Technical Assistance	●	●	●	●
7. Assist new, startup firms, particularly in fields in which DBE participation has historically been low	Technical Assistance	●	●	●	●
8. Ensure distribution of DBE directory to potential prime contractors	Technical Assistance		●		●
9. Assist firms in developing their capability to utilize emerging technology and conduct business through electronic data	Technical Assistance	●	●	●	●
10. Other measures					
a. Prompt payment 49 CFR 26.29	Contracting Process Improvements	●	●	●	●

Source: BBC Research and Consulting.

In addition to improving visibility, Caltrans could take additional steps to reduce real and perceived barriers to MBE/WBE and DBE participation in the RFP and RFQ processes. Strategies might include sending notice to registered firms within the relevant fields, enclosing lists of potential subcontractors as an attachment to the solicitation, and providing information in languages other than English.

Notice of contracts. At regular intervals (monthly or quarterly), Caltrans might also issue notice of contracts awarded and thereby inform small businesses about which firms received awards or entered agreements with Caltrans during the relevant period. Distributing these notices in sources beyond the Caltrans website would improve small businesses' ability to identify and target their marketing efforts to firms that have worked or are working with Caltrans.

Electronic media. Caltrans could further develop the content of its website to include more detailed information about doing business with the department, solicitation notices, bid lists, bids and proposals, bid status reports, and other appropriate information. This site could contain a summary overview on the certification process and calendars of upcoming events, workshops, bid meetings and current and future projects and deadlines at least one month in advance. Caltrans might also consider developing an independent site, linking from the Department's homepage, upon which professionals and Caltrans staff can post discussions, address frequent questions, and host live virtual forums for networking and identifying opportunities to partner on bids.

In addition to quarterly publication of the complete CUCP directory as an electronic database file, Caltrans could utilize Web-based database applications to permit firm searches on a variety of criteria, including firm name, geographic scope, primary field, past certifications and certifying agency. Caltrans could also publish a similar database search interface for the bidders list that it will develop in compliance with the Federal DBE Program mandate.

Communication channels. Caltrans should strengthen existing relationships and seek new relationships with trade associations and professional organizations, including those with small business and minority- and women-owned constituencies. Regular communication with these groups could consist of updates about the Department's implementation of the Federal DBE Program, adjustments to contracting requirements and notice of bidding opportunities.

As a service to these groups and to facilitate a two-way flow of information between current and prospective bidders and contractors, Caltrans could advertise and encourage businesses to attend events hosted by trade organizations. The Department could also maintain and publish a listing of such trade organizations and their individual missions to assist bidders and contractors in identifying additional sources of technical support and information.

Feedback channels. Feedback from contractors is critical for Caltrans to be successful in its outreach efforts. BBC recommends a Web-based interface for comments (including anonymous comments) that would be forwarded by email. Such interface should be accessible through a clearly-labeled link on the Department's homepage. Additionally, Caltrans could improve visibility of procedures for submitting feedback regarding bid processes and contract administration through other channels such as toll-free comment/question lines and frequent public meetings in the districts.

Outreach. Caltrans should expand outreach efforts through a formal, consistently-applied program for increasing small business participation in the construction and engineering contracting process. Elements of this comprehensive plan might include:

- District- or region-level events at which prime contractors could meet new and existing small subcontractors with interests in performing elements of future Caltrans projects;
- Networking events for small businesses to meet each other and to exchange information about business practices, training opportunities and other insights;
- Division-specific trade shows, procurement fairs, seminars, and training conferences at which interested firms could meet Caltrans procurement staff and learn about general procurement policies and procedures; and
- Contract-specific pre-bid conferences at which firms can ask questions about bid applications and registration/certification processes as well as identify potential partners.

Although these activities may be occurring in some districts, Caltrans should ensure that all districts have active outreach programs.

Technical Assistance

Caltrans currently contracts supportive services for small businesses and for disadvantaged business enterprises and intends to coordinate future supportive services through the state's community college system. The schedule of services has included valuable information on payroll and accounting, marketing plans, trade-relevant computer applications, and strategies for securing financial and bonding assistance. The study team recommends continuing these existing services, expanding the scope of services dramatically, and expanding the geographic reach of these services. These services should also be tiered to the specific stage of business development of individual firms (e.g., develop more sophisticated assistance for firms that may be looking to expand into prime contracting or diversify into new fields).

General assistance. Caltrans should continue to implement and monitor a supportive services program to develop and improve immediate and long-term business management, record keeping, and financial and accounting capability for small businesses. Caltrans should consider the recommendations that its current supportive services contractor offers regarding the types and locations of services and the strategies for marketing these to the diverse needs, availability and geographic dispersion of interested firms.

Advanced assistance. Caltrans should consider directing more technical attention to planning, marketing, insurance, and workforce training for small businesses. Such assistance would benefit firm owners and managers who have graduated the Department's introductory business assistance workshops and those who are interested in expanding the scope or scale of their older and more established businesses.

New technology training. Caltrans could conduct training workshops to assist small businesses with utilizing emerging technology and conducting business through electronic media. Realistically, doing business with Caltrans requires Internet access and computer systems. Workshops on selecting, managing and adapting information technology infrastructures are important as Caltrans and other public sector solicitors move towards electronic modes of communication and commerce.

Caltrans contracting. Caltrans could organize regular workshops on "doing business with Caltrans." These workshops could address the general procedures and requirements to complete and submit bids for Caltrans contracts, sources for information about solicitations, best practices to identify subcontracting opportunities with larger firms, and assistance with the certification process for small, disadvantaged or disabled veteran business status. Such workshops should be tiered to the level of experience and sophistication of business owners and managers.

At least one Caltrans contracting workshop could be held quarterly in each of the twelve Caltrans districts, and the location of these workshops could vary within each district. For example, meetings in District 6 might be held in Fresno, Bakersfield, Visalia and Madera.

Mentor-protégé program. Caltrans has pilot mentor-protégé programs for firms working with procurement and contract managers in the District 7 (Los Angeles) and District 4 (Oakland) offices. Four other districts have made significant in-roads toward starting a mentor-protégé program.

Pursuant to Executive Order S-11-06, Caltrans should provide stronger assistance to the districts in developing, engaging support for, and implementing a similar program throughout the state. Where appropriate, district leadership should partner with local small business development centers for technical and administrative assistance.

In addition to coordinating the selection and match of mentor-protégé relationships between established firms and small businesses throughout the state, Caltrans could draft and implement a program of evaluations to determine participants' satisfaction and to document outcomes for small businesses partners. Outcomes would be determined through a mix of qualitative and quantitative evidence, such as anecdotal interviews with participants, bid success rates, changes in annual revenue, and other critical measurements of business vitality and growth.

Access to Capital

As illustrated by the quantitative and qualitative evidence in Appendices F and I, access to capital is critical to starting and growing a business within California's transportation construction and engineering industry. Capital requirements for bidding and completing work in this industry favor larger firms. Conversely, firms that are owned and controlled by members of economically disadvantaged groups experience continued barriers to sources of capital necessary to finance their business and to compete for projects in both the private and public sectors.

Given these findings, the study team recommends that Caltrans utilize existing programs and take proactive steps to develop its own programs of financial, insurance and bonding assistance to small businesses. Consideration of such strategies is particularly timely in light of Executive Order S-11-06 and the creation of the Small Enterprise Office within the Business, and Transportation Housing Agency.

Financial assistance. Caltrans could also help small businesses to utilize resources from the California Small Business Loan Guarantee Program. This program allows a business to obtain a loan or line of credit that it could not otherwise obtain from private sector sources.

Insurance assistance. Caltrans should take direct steps to assist small businesses in obtaining adequate insurance to compete for contracts and subcontracting opportunities on construction and engineering projects. Caltrans should make insurance requirements a focal element of its communication, outreach and training programs. Additionally, Caltrans should consider a program to provide individualized assistance to small businesses seeking to satisfy the insurance requirements of specific contracts or contract types.

Bonding assistance. Caltrans could implement a bonding assistance initiative to provide emerging contractors and other small businesses with improved means to satisfy requirements for larger projects. A statewide small business bonding program is awaiting legislative approval and funding during the current session (AB1641). The projected $40 million program could provide assistance to cover 300 to 500 prime contracts and subcontracts per year, in amounts ranging from $50,000 to $200,000 per recipient on a contract. Most of these prime contracts and subcontracts will be with Caltrans.

Contracting Practice Improvements

Many of the business owners and trade association leaders interviewed for this study reported barriers to their participation in Caltrans contracts that stemmed from the size of contracts, the requirements to bid and complete contracts, and the daily administration of contracts and payment. Many business owners recognize that these barriers are difficult to change. However, certain improvements in the area of contracting procedures could greatly reduce the barriers that small businesses encounter in working with Caltrans.

Segmenting contracts. To comply with the Federal DBE Program, Caltrans must arrange solicitations, times for the presentation of bids, project size, specifications, and delivery schedules in ways that facilitate participation by small businesses. Consistent with this requirement, Caltrans should split large contracts to make them more accessible to small businesses and should encourage prime contractors to subcontract portions of work that they might otherwise perform with their own forces.

Breaking up highway projects into smaller segments is difficult. Several participants in the study's interviews indicated that preliminary steps towards contract segmentation were underway for projects let by the Consultant Services Division. A recent directive to that division called for the creation of contracts for $500,000 or less to help small businesses compete for a larger share of the contract dollars for engineering and professional services.

Recognizing that contract segmentation may be occurring for some types of work or for some districts, Caltrans should develop procedures for encouraging organization-wide efforts across all districts.

Relaxing requirements. To the extent permitted by law and, where possible, with appropriate amendment to law, Caltrans should engage in certain efforts to simplify the bidding process, relax or reduce bonding and insurance requirements, and minimize or eliminate the impact of surety costs from bids. However, some of these requirements are written into state law and would require new legislation.

Prompt payment. Caltrans should improve its enforcement of "prompt pay" rules as they relate to internal timelines for distributing payment for services and to the schedules governing prime contractors' distribution of payment to subcontractors. Caltrans could require contractors to provide business accounts for direct payment transfers.

Caltrans should also communicate with subcontractors regarding payments to prime contractors and provide procedures for subcontractors to issue grievances regarding undue delay in payment. Strict and consistent penalties could be levied against prime contracting firms that do not distribute payment to subcontractors within 10 working days of a Caltrans invoice payment.

Joint venture contracting. Caltrans should consider a program of incentives to encourage joint ventures between more and less experienced businesses on its construction and engineering contracts. This program would include oversight and adequate reporting procedures to measure firms' satisfaction with participation and outcomes for the less experienced firm. Measurable outcomes might include quality of experience, contacts and resources generated as a result of close working relationships with mentoring firms.

Staff training. Caltrans should develop and implement Department-wide training programs for all procurement and contract administrative staff. In addition to educating staff regarding the Department's initiatives to increase utilization of small businesses, such training would address internal business climate issues that may affect the success of minority- and women-owned businesses seeking bid opportunities for construction and engineering projects.

Contracting staff should receive additional guidance about new outreach and communication strategies and about technical and capital assistance for small businesses. They should be equipped with directories to assist small businesses in identifying bid opportunities, frequent contractors, professional associations, training workshops and other events of interest.

Data Collection, Tracking and Reporting

Following the guidelines of 49 CFR Section 26 and the recommendations of both the U.S. Department of Transportation and the U.S. Commission on Civil Rights, the study team highly recommends that Caltrans improve its data collection, tracking and reporting requirements and procedures. The recommended improvements will ensure compliance with the letter and spirit of existing federal legislation and will inform and aid future adjustments to the Department's implementation of the Federal DBE Program.

Comprehensive bidders list. Caltrans should develop a master database of prime contractors, subcontractors, suppliers, truckers and other firms available to work on state transportation construction and engineering contracts. This bidders list would compile firm-specific information on every prime contractor and subcontractors, even if the prime contractor is an unsuccessful bidder.

Caltrans does not have a comprehensive bidders list today because of lack of contractor participation. To address this need, Caltrans should make it a condition of bid that the prime contractor and subcontractors have completed a bidder registration form at time of bid. Such registration can be submitted with the bid. Any subcontractors, including second-tier subcontractors, truckers and suppliers, added after time of bid would also require a completed bidder registration form. Caltrans should require contractors to periodically update the bidder registration information.

In addition to being a required element of the Federal DBE Program (49 CFR Section 26.11 (b)), a comprehensive bidders list will assist Caltrans in setting annual DBE goals in the future, in conducting outreach to prospective contractors and tracking the types of firms receiving work. The database also allows small and emerging subcontractors and suppliers to make themselves known to potential prime contractors.

The Federal DBE Program requires collection of each firm's name, address, ownership status (DBE or non-DBE), founding date and average annual gross receipts by size class. Additionally, the BBC study team recommends that Caltrans obtain the gender and the race and ethnicity for all firms, including those that are not DBE-certified; complete contact information including e-mail address; DUNS, EIN or other firm identification number; work specialization; and geographic reach.

DBEs and non-DBE prime contractors and subcontractors should be treated equally in complying with this requirement. This initiative would require additional databases and staff time to implement and evaluate bidders' responsiveness or responsibility. Development of a bidders list is a necessary step to implement several of the other recommendations.

Additionally, Caltrans should create an effective way for businesses to revise their contact information on the bidders lists and in the CUCP directory. The study team highly recommends an update form online in addition to any paper-based registration and update forms.

Time of award subcontractor information. At present, Caltrans' electronic databases do not consistently record non-DBE subcontractors. Such data collection is a required element of the Federal DBE Program. Caltrans will be unable to accurately track the percentage of subcontracting work that goes to DBEs without these data. Other state departments of transportation have successfully developed these data collection systems.

At present, Caltrans requires construction contractors to submit a Form 1201 that lists subcontractors in order to confirm that the prime contractor is performing more than one-half of the work. District-level staff should record firm information and subcontract amounts for each of the subcontractors (DBEs and non-DBEs alike) into an electronic database. As a requirement to bid, each of these firms would need to be identified in the Caltrans bidders list.

Final subcontractor payment information. Caltrans does not consistently collect payment information for non-DBE subcontractors. Clarifying and enforcing the reporting requirements for Form 2402 is a first step. Caltrans should train district-level staff to enter these reports into an electronic database of actual utilization.

Information on major suppliers and truckers. At present, Caltrans does not require prime contractors to identify suppliers and truckers. Rather, Caltrans requires this information only when a DBE supplier or trucker was used to meet a DBE project goal. Caltrans can more easily track relative DBE and non-DBE supplier and trucker participation if this information were consistently collected at the time of bid and in a final report of utilization. The study team suggests that Caltrans consider extending the reporting requirements of Form 2402 to include suppliers and truckers.

Proposed and actual engineering utilization. Several districts have developed electronic databases that track invoice amounts for prime consultants and subconsultants on engineering contracts. The BBC study team recommends that Caltrans extend these districts' efforts across the Department. Staff in each district should record firm-specific payment information for every task order and contract. The Central Region's invoice tracking procedure and District 8's summary reports are potential models for a new Department-wide system.

To facilitate consistency in reporting procedures across divisions, Caltrans should require the completion of an equivalent to Forms 1201 and 2402 for each task order completed under a contract agreement. District-level staff should enter the information from these forms into an engineering contracts database separate from the invoice tracking spreadsheets discussed above. Such reporting procedures would centralize the relevant utilization data within a single set of contract-specific source documents and provide an additional check between proposed utilization, invoiced expense, and actual utilization.

Similar collection for state-funded contracts. Data for state-funded contracts provide a point of comparison for evaluating the relative success of any future initiatives that focus on federally-funded contracts. To improve the reliability of these comparisons, Caltrans should require bidders list registration and similar contract reporting procedures for its state-funded contracts as for federally-assisted contracts. The same systems described above and be implemented for state-funded contracts.

Registration and reporting from local agencies. Federal DBE Program requirements extend to subrecipients receiving federal assistance administered by Caltrans. Caltrans should work with local agencies to develop consistent bidder registration and data reporting procedures. Caltrans could assist by opening its own bidders list for local agency use. These procedures should resemble those adopted for construction and engineering contracts let by Caltrans and should be applied for all local agency contracts, regardless of the fund's source (federal or state).

As a first step, the BBC study team recommends modifications to and the extension of reporting requirements now contained in Forms 17F and 15G. Additionally, district local assistance engineers should be equipped with a standardized database and guidance for entering firm-specific information for contracts executed using federal and state funds from Local Assistance.

Certification of DBEs

Caltrans will also need to do more to streamline DBE certification for new and renewing DBE firms. It will be important for Caltrans to communicate the benefits of DBE certification. A fraction of minority- and women-owned firms in the California transportation contracting industry are currently DBE-certified.

Resource Requirements

Implementation of these recommendations across an organization as large and complex as Caltrans is difficult. Other state and federal requirements govern bidding and contract management processes. Districts have different data collection and compilation practices that will need to be standardized. Caltrans works with more than 600 local agencies, all of which may need guidance on any new procedures. A large contractor pool must also be informed about the new requirements and programs.

Because of these complexities, Caltrans should proceed cautiously in implementing the above recommendations. It must also add resources to implement neutral programs and to track MBE/WBE as well as DBE utilization.

SECTION X.
Summary

As part of its implementation of the Federal DBE Program, Caltrans must set an overall goal for DBE participation, determine the portion of the overall goal it will attempt to meet through neutral versus race- and gender-conscious means, and consider specific measures its will use to execute the Program.

Overall Annual DBE Goal

The Federal DBE Program calls for a "base figure analysis" and consideration of any "step 2" adjustments in deriving an overall annual goal for DBE participation in federally-funded contracts.

Base figure analysis. After considering type, contract role, location and size of work involved in federally-funded projects and the relative availability of firms to perform that work, BBC determined that 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.

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. After removing the largest minority- and women-owned firms from the analysis of potentially DBE-certified firms, the revised based figure analysis indicates 13.5 percent DBE utilization.

Step 2 adjustments. Caltrans could consider adjustments in the base figure through a "step 2" process. BBC reviewed relevant types of information for a step 2 adjustment that are outlined in the Federal DBE Program.

Based on the information compiled in the Caltrans disparity study, there are reasons to consider downward adjustments to the base figure and reasons to consider upward adjustments to the base figure. It will be difficult for Caltrans to encourage the many non-DBE-certified firms to apply for certification. However, other information indicates barriers to entry into the California construction and engineering industries, low rates of business ownership for certain groups working in the industries, lower business earnings and other barriers for minority- and women-owned firms including access to capital.

Caltrans should review information factors indicating downward adjustments in the base figure and factors indicating upward adjustments in the base figure.

Caltrans should include all of the above information in its consideration of a base figure and whether or not to make any step 2 adjustment when determining an overall annual goal for DBE participation.[1]

Percentage of the Annual Goal to be Achieved through Neutral Means

The Federal DBE Program requires Caltrans to assess the percentage of its overall annual DBE goal that can be achieved through neutral means, and if necessary, the percentage to be achieved through race- and gender-conscious measures.

Evidence of disparities when Caltrans implements an all-neutral program. BBC compared utilization and availability of minority- and women-owned firms for both state-funded contracts and for federally-funded contracts.

State-funded contracts. Because Caltrans has operated a solely neutral program for state-funded transportation contracts since 1998, analysis of these contracts suggests how closely utilization matches availability in an all-neutral environment. BBC found that MBE/WBE utilization on state-funded contracts reached only 59 percent of what would be expected based on MBE/WBE availability for these contracts for 2002 through 2006.

Federally-funded contracts after May 1, 2006. BBC also examined MBE/WBE utilization and availability for federally-funded contracts for May through December 2006, after Caltrans discontinued DBE contract goals. Based on the limited number of federally-funded prime contracts and subcontracts during this time period, it appears that overall MBE/WBE utilization was relatively unchanged for the eight months following adoption of an all race- and gender- neutral program. MBE/WBE utilization was about 87 percent of what would be expected based on availability for the particular contracts and subcontracts in this time period, similar to the level prior to discontinuing the DBE contract goals.

It may be too early to tell whether or not MBE/WBE utilization on federally-funded contracts will continue at this level or whether utilization will decline to what has been found for state-funded contracts. Caltrans should closely monitor utilization of minority- and women-owned firms as well as certified DBEs on both federally-funded and state-funded contracts after December 2006, the end of the time period for the utilization analysis in the BBC Disparity Study.

Past effectiveness of the DBE contract goals program. Even with the DBE contract goals program, there were disparities between overall utilization and availability of minority- and women-owned firms in federally-funded contracts. MBE/WBE utilization was about 83 percent of what would be expected based on relative availability for those contracts.

[1] As discussed in Appendix J, BBC analyzed information on contracts using Federal Transit Administration funds administered through Caltrans and recommends that Caltrans not apply the availability information presented here to develop an overall annual goal for DBE participation on FTA-funded contracts. Caltrans should consider adopting the overall national DBE goal for these contracts until it develops a bidders list that includes firms available for FTA-funded activities.

Other disparity analysis. Beyond these analyses of overall utilization and availability of minority- and women-owned firms, BBC examined quantitative information concerning the California marketplace and the relative use of minority- and women-owned firms for specific types and locations of Caltrans contracts. BBC conducted disparity analysis by specific race/ethnicity/gender ownership of firms. This analysis found evidence of disparities for each race/ethnic/gender group of MBE/WBEs included in the Federal DBE Program for certain elements of transportation construction or engineering contracts. There is also some evidence of disparities in each of the 12 Caltrans districts.

Disparities between utilization and availability were often most severe for African American, Asian-Pacific American and Native American-owned firms. For example, African American-owned firms received only 15 cents of every dollar expected on state-funded construction and engineering contracts after considering the availability of African American-owned firms for specific components of these contracts. Similar levels of disparities were found for certain types of work for Asian-Pacific American- and Native American-owned firms. (Based on the Ninth Circuit decision in *Western States Paving v. WSDOT*, if Caltrans chooses to implement any race- or gender-conscious remedies, it must review the evidence for each minority group and for women to determine the specific groups eligible for certain remedies.)

Other quantitative information. BBC presented information indicating barriers to entry and success for minorities and women in the California construction and engineering industries that Caltrans should review as part of any consideration of step 2 adjustments in the overall DBE goal. This information should also be reviewed in considering types of remedies Caltrans should pursue in its implementation of the Federal DBE Program.

Qualitative information. The disparity study team collected and reviewed qualitative information from in-depth personal interviews conducted with minority-, women- and majority-owned firms across the state, from oral and written testimony at public hearings held by Caltrans, and from other sources. Although there were some instances in which minority and female business owners reported that they were treated differently because of their race or gender, many minority and female business owners identified disadvantages pertaining to the size and age of their firms.

Opportunities to prove quality of work. Some minority and female business owners who seek subcontracts frequently reported that it is difficult to obtain opportunities with prime contractors who are not familiar with their work. Once they have a track record with a prime contractor, the prime often continues to consider them for work. For some MBE/WBEs, the past DBE contract goals program provided an opportunity to prove the quality of their work to prime contractors who otherwise would not have considered using their firms.

Abuse of good faith efforts process. A number of people who provided input through interviews or testimony said that some prime contractors abused the past good faith efforts process related to Caltrans' DBE subcontracting goals program. They reported that prime contractors would send notices of subcontracting opportunities to DBEs to just be able to document that they had done so, but were not serious about using DBEs as subcontractors.

Barriers in obtaining prime contracts. Based on interviews and testimony, contract sizes and bonding requirements for Caltrans construction work often preclude small firms that bid as primes in the private sector from pursuing Caltrans prime contracts. It was also widely reported that Caltrans

favors large engineering firms with substantial Caltrans experience for its engineering work. Many firms complained that they could not win such work as prime consultants if they were not allowed to established such as track record.

These size-related barriers appear to affect utilization of minority- and women-owned firms as prime contractors. There may be additional barriers beyond size of firm, however. BBC's statistical analysis indicated that disparities for minority- and women-owned firms persisted after controlling for size of contracts or certain aspects of firm "size" (for example, the disparity analysis controls for the size of contracts firms have performed or bid on in the past). Further, BBC cannot rule out that current "size" of business is unaffected by past discrimination. Even so, many of the firm owners providing anecdotal information as part of this study pointed to barriers other than race and gender discrimination.

Caltrans should review the extensive qualitative information provided by firm owners and others when considering implementation of the Federal DBE Program.

Caltrans implementation of neutral programs. The Federal DBE Program requires Caltrans to meet the maximum feasible portion of its overall goal by using race-neutral means of facilitating DBE participation. Results of BBC's review include the following:

1. Caltrans has implemented some of the types of neutral remedies suggested in the Federal DBE Program but not others.

2. Some neutral remedies are in place in some districts or regions of the state but not others.

3. Many of the barriers reported by minority- and women-owned firms suggest further neutral measures such as:

    - Better outreach and communication;
    - Additional technical assistance to small businesses and DBEs;
    - Redesigning contractor and consultant selection practices to provide more opportunities for small businesses seeking construction and engineering prime contracts; and
    - Bonding programs and other assistance to small businesses and DBEs.

4. Caltrans' past implementation of the Federal DBE Program did not bring utilization of minority- and women-owned firms on federally-funded contracts to the level expected based on relative availability of MBE/WBEs for this work.

5. Additional actions such as developing a bidders list and improved data collection, tracking and reporting are necessary to be able to fully measure success of neutral measures in opening opportunities for minority- and women-owned firms.

Caltrans should consider this and other information in the study in determining whether any portion of the overall annual goal for the next fiscal year should be achieved through race- or gender-conscious means.

Measures to Implement the Program

In the 2002 through April 2006 study period, Caltrans' DBE contract goals program did not fully address disparities between utilization and availability of minority- and women-owned firms on federally-funded contracts. Strong new measures are needed, especially programs to assist development of the minority- and women-owned business community and to open both prime contract and subcontract opportunities to smaller businesses.

BBC recommends multiple tiers of assistance depending upon the age, size, line of work and other business factors to make assistance most useful for firms in different stages of development. Caltrans should do more to increase utilization of emerging and more developed MBEs and WBEs, including those that are too large to be DBE-certified or otherwise have not sought DBE certification.

Caltrans needs additional metrics to track success beyond those suggested in the Federal DBE Program, including careful tracking of MBE/WBEs (not just DBE participation) in both federally-funded and state-funded contracts. For example, one measure of Caltrans' success should be the number of minority- and women-owned firms that grow too large to be eligible for DBE certification. To this end, Caltrans will need to refine its data collection systems in collaboration with local agencies. These steps are critical for Caltrans to be in compliance with the Federal DBE Program and ensure that it is not an active or passive participant in race or gender discrimination against minority- and women-owned firms.

Some of these additional efforts may already be in development at Caltrans. Because of its size and opportunities for innovation at the district level, Caltrans can evaluate "best practices" in certain districts and expand them across the organization. Other actions may require state legislation as well as coordination with other state agencies, local governments and private sector partners. Caltrans must continue to work as a partner with USDOT in these efforts.

Caltrans will need to devote additional resources to implementing neutral measures and to comprehensively tracking MBE/WBE and DBE utilization on both federally-funded and state-funded transportation contracts.

APPENDIX A.
Definitions of Terms

This appendix provides explanations and definitions useful to understanding the Availability and Disparity Study. These definitions are only relevant in the context of the Caltrans Availability and Disparity Study Interim Report.

Anecdotal evidence. Includes personal accounts of incidents, including of discrimination, told from an individual's perspective.

Availability analysis. Examination of the relative number of DBEs or MBE/WBEs ready, willing and able to perform work related to transportation construction and engineering work for Caltrans or local agencies.

Business. A for-profit company, including all of its establishments (equivalent to "firm").

Business listing. A record in the Dun & Bradstreet database of businesses (or other database). A D&B record is just a "listing" until the study team determines it to actually be a business establishment with a working phone number.

Business establishment. A place of business with an address and working phone number. One firm can have many business establishments. (Same as "establishment.")

California Department of Transportation (Caltrans). The California Department of Transportation (Caltrans), a part of the State's Business, Transportation and Housing Agency, is the owner/operator of California's federal and state highway system, provides inter-city rail services, assists local airports and provides other programs such as transportation safety.

California Unified Certification Program (CUCP) database. The statewide electronic directory of firms certified as DBEs in California under the guidelines in 49 CFR Part 26.

Certified small business. A firm certified by the State of California that, together with affiliates, has employment of 100 or fewer workers and average annual gross receipts of $12 million or less over the previous three years (or if a manufacturer, simply have 100 or fewer employees). To be certified as a small business by the State of California, the firm must also have its principal office in California and have its owners domiciled in California. The firm must be independently owned and operated. It cannot be dominant in its field of operation.

Contract. A legally binding relationship between the seller of goods or services and a buyer.

Contractor. The study team uses "contractor" to refer to firms performing construction contracts.

Controlled. Exercising management and executive authority for a company, per 49 CFR Section 26.71.

Disadvantaged Business Enterprise (DBE). A small business owned and controlled by one or more individuals who are both socially and economically disadvantaged according to the guidelines in the Federal DBE Program (49 CFR Part 26). Membership in certain race and ethnic groups identified under "minority-owned business enterprise" in this appendix may meet the presumption of socially and economically disadvantaged. Women are also presumed to be socially and economically disadvantaged. Examination of economic disadvantage also includes investigating the gross revenues and the firm owner's personal net worth (maximum of $750,000 exclusive of equity in a home and in the business). Some minority- and women-owned firms do not qualify as DBEs because of the gross revenue or the net worth requirements. A firm owned by a non-minority male can be certified as a DBE. Tribally-owned concerns can be certified as a DBE if the enterprise meets the requirements in 49 CFR Part 26.

Disparity. A difference or gap between an actual outcome and a reference point. For example, a difference between an outcome for one race/ethnic group and an outcome for non-Hispanic whites may constitute a disparity.

Disparity analysis. Comparisons of actual outcomes with what might be expected based on other data. Analysis of whether there is a "disparity" between DBE utilization and availability is one tool in examining whether there is evidence consistent with discrimination against DBEs.

Disparity index. Computed by dividing percentage utilization by percentage availability and then multiplying the result by 100. A disparity index of 100 indicates "parity."

Dun & Bradstreet. The leading firm in the United States and abroad that provides lists of business establishments and other business information (see www.dnb.com).

Employer firms. Firms with paid employees other than the business owner and family members.

Enterprise. An economic unit that could be a for-profit firm or establishment, not-for-profit organization or public sector organization.

Establishment. See "business establishment."

Federal DBE Program. Unless otherwise specified, "Federal DBE Program" refers to the Disadvantaged Business Enterprise program established by the U.S. Department of Transportation after enactment of the Transportation Equity Act for the 21st Century (TEA-21) as amended in 1998. The elements of the Program are set forth in 49 CFR Part 26.

Federal Highway Administration (FHWA). An agency of the USDOT that works with state and local governments to construct, preserve and improve the National Highway System, other roads eligible for federal aid, and certain roads on federal and tribal lands.

Federal Transit Administration (FTA). An agency of the USDOT that administers federal funding to support local public transportation systems including buses, subways, light rail, passenger ferry boats and other forms of transportation.

Firm. See "business."

Federally-funded contract. Any contract or project funded in whole or in part with FHWA or FTA financial assistance, including loans. As used in this study, it is synonymous with "federally-assisted contract."

Industry. A broad grouping of firms providing related goods or services.

Local agency. Any local government receiving money through the Caltrans Local Assistance Program. More than 600 municipalities, counties and regional agencies receive federal and state transportation funding through the Caltrans Local Assistance Program.

Local Assistance Program. Caltrans program that provides financial support for local agency transportation construction and engineering projects. Local agencies contract for transportation construction and design contracts using funds from this program. Caltrans retains certain oversight in the use of the funds, which may also involve federal funds. Contracts funded through the Local Assistance Program are "local assistance contracts."

Majority-owned businesses. For-profit firms not owned and controlled by minorities or women (see definition of "minorities" below).

Microbusiness. A firm that, together with affiliates, has average annual gross receipts of $2,750,000 or less over the previous three years. For more on this State of California definition, see http://www.pd.dgs.ca.gov/smbus/mbdef.htm.

Minorities. Racial and ethnic groups identified in the federal guidelines in 49 CFR Part 26:

- Black Americans (or "African Americans" in this study), which includes persons having origins in any of the black racial groups of Africa;
- Hispanic Americans, which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
- Native Americans, which includes persons who are American Indians, Eskimos, Aleuts or Native Hawaiians;
- Asian-Pacific Americans, which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, Hong Kong, and other countries and territories in the Pacific set forth in 49 CFR Section 26.5; and
- Subcontinent Asian Americans, which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka.

Minority-owned business (MBE). A firm with at least 51 percent ownership and control by minorities. Minority groups are defined according to federal guidelines, as outlined above. For purposes of this study, a firm need not be certified to be counted as a minority-owned firm. Firms owned by minority women are counted as MBEs in this study (where that information is available).

NAICS code. North American Industry Classification System code that identifies primary line of business of a an enterprise. http://www.census.gov/epcd/www/naics.html.

Non-DBEs. Firms not certified as DBEs.

Non-response bias. Occurs when the observed value to a survey question differs from what would be obtained if all individuals in a population, including non-respondents, answered the question.

Owned. Ownership of at least 51 percent of a company. A "minority-owned" firm is at least 51 percent owned by one or more minorities. (For DBE certification, additional guidelines are set forth in 49 CFR Section 26.69.)

Prime consultant. The professional services firm performing a contract for an end user such as Caltrans.

Prime contract. The contract between the seller and an end user such as Caltrans.

Prime contractor. The firm performing a contract for an end user such as Caltrans.

Race-and gender-conscious. Remedies that apply to individuals or firms that includes some races and ethnicities and not others, and women and not men. This term is equivalent to "race- and gender-based." A DBE contract goal is one example of a race- and gender-conscious remedy. Note that this term is more accurately "race-," "*ethnicity-*" and "gender-" conscious. For ease of communication, the study team has shortened this to "race- and gender-conscious" remedies.

Race- and gender-neutral. Remedies that apply to individuals or firms that are not classified based on race, ethnicity or gender. Note that this term is more accurately "race-," "*ethnicity-*" and "gender-" neutral. For ease of communication, the study team has shortened this to "race- and gender-neutral."

Race- and gender-neutral remedies may include assistance in overcoming bonding and financing obstacles, simplifying bidding procedures, providing technical assistance, establishing programs to assist start-up firms, and other methods open to all firms or any disadvantaged firm regardless of race or gender. (A broader list of examples can be found in 49 CFR Section 26.51(b).)

Relevant geographic market area. The geographic area that contains most establishments receiving Caltrans or local agency transportation construction and engineering-related work, based on dollars. It is also referred to as the "local marketplace."

Remedy. A program element designed to address barriers to full participation for a particular group.

SIC code. Standard Industrial Classification code, which describes the primary business of a firm (see SIC Manual at http://www.census.gov/epcd/www/sic.html). The federal government groups firms into industries down to 4-digit SIC codes. Dun and Bradstreet further classifies types of work to the 8-digit level.

Small business. In general, a firm with low revenues or employment size relative to other firms in the industry. "Small business" does not necessarily mean that the firm is certified as such.

Small Business Administration (SBA). The U.S. Small Business Administration, which is an independent agency of the United States government.

State-funded contract. Any contract or project funded in whole or in part with State of California funds administered through Caltrans that does not include federal funds.

Statistically significant difference. A difference in which chance in the sampling process can be eliminated as a cause, at the 95 percent confidence level (meaning that chance in the sampling process could still explain the difference in no more than 5 out of 100 cases).

Subconsultant. A professional services firm performing a service for the prime consultant as part of a larger contract.

Subcontract. The contract between a prime contractor and another firm selling services to the prime contractor.

Subcontractor. A firm performing a service for a prime contractor as part of a larger construction or engineering project.

Subrecipient. Local agency receiving USDOT financial assistance directly from Caltrans.

Supplier. A firm selling supplies to a firm as part of a larger project.

Transportation construction and engineering. Work involving construction, design or related services concerning transportation facilities or projects.

USDOT. U.S. Department of Transportation, which includes the Federal Highway Administration, the Federal Transit Administration and the Federal Aviation Administration.

Work field. A narrow grouping of firms providing related goods or services, sometimes referred to as "work specialty." Sometimes a work field is one 4- or 8-digit SIC code. In other cases, it combines 4-digit SIC codes.

Utilization. Percentage of total dollars of a type of work going to DBEs or MBE/WBEs (or another group).

Women-owned business (WBE). A firm with at least 51 percent ownership and control by women. For this study, a firm need not be certified as a WBE or DBE to be counted as a woman-owned firm. In addition, firms owned and controlled by minority women are counted as minority-owned firms. Therefore, WBEs principally refer to firms owned by white women.

APPENDIX B.
Legal Environment for Caltrans DBE Program

The California Department of Transportation ("Caltrans") is a recipient of federal funds from the United States Department of Transportation ("USDOT"). Therefore, Caltrans must comply with federal regulations (49 CFR Part 26) and implement the Federal Disadvantaged Business Enterprise (DBE) Program. Caltrans is required to develop and submit for approval to the USDOT its DBE program, including an overall goal for DBE participation on federally-funded contracts.[1] The annual DBE goal, depending on the evidence available to Caltrans, may be achieved through the use of race- and gender-neutral means, race- and gender-conscious means, or a combination of these measures.[2]

Caltrans is responsible for serious, good faith consideration of workable race- and gender-neutral means, including those identified in 49 CFR Section 26.51(b), that can be implemented.[3] The USDOT has advised that recipients should take affirmative steps to use as many of the race-neutral means of achieving DBE participation identified at 49 CFR Section 26.51(b) as possible.[4] The Ninth Circuit Court of Appeals in *Western States Paving Co. v. Washington State DOT* found that "the regulations require a state to 'meet the maximum feasible portion of [its] overall goal by using race neutral means.'"[5] In formulating its implementation of the Federal DBE Program, Caltrans must assess how much of the annual DBE goal can be met through neutral means and what percentage, if any, should be met through race- and gender-conscious means.

Race- or gender-conscious measures are not appropriate unless they are to remedy identified discrimination or its effects in the state transportation contracting industry. If Caltrans implements race- and gender-conscious measures, it is subject to the "strict scrutiny" analysis as applied by the courts.[6] The first prong of the strict scrutiny analysis requires a governmental entity to have a "compelling governmental interest" in remedying past identified discrimination. The Ninth Circuit and other federal courts have held that, with respect to the Federal DBE Program, state departments of transportation ("DOTs") do not need to independently satisfy this prong because Congress has

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[1] 49 CF. Section 26.45.

[2] 49 CFR Sections 26.45, 26.51.

[3] 407 F.3d 983, 993 (9th Cir. 2005) (citing 49 CFR Section 26.51(a)).

[4] Questions and Answers Concerning Response to *Western States Paving Company v. Washington State Department of Transportation* [hereinafter DOT Guidance], available at http://www.fhwa.dot.gov/civilrights/dbe_memo_a5.htm. See 49 CFR Section 26.9 (January 2006).

[5] 407 F.3d at 993; 49 CFR Section 26.51.

[6] See *City of Richmond v. J.A. Croson*, 488 U.S. 469 (1989); *Adarand Constructors, Inc. v. Pena*, 515 U.S. 200 (1995); *Western States Paving*, 407 F.3d 983. The Ninth Circuit Court of Appeals and other courts have applied "intermediate scrutiny" to gender-conscious programs. The Ninth Circuit has interpreted this standard to require that gender-based classifications be: (1) Supported by both an exceedingly persuasive justification; and (2) Substantially related to the achievement of that underlying objective. See *Western States Paving*, 407 F.3d at 990 n6; *Coral Constr. Co. v. King County*, 941 F.2d 910, 931 (9th Cir. 1991); *Equal. Found. v. City of Cincinnati*, 128 F.3d 289 (6th Cir. 1997).

satisfied the compelling interest test of the strict scrutiny analysis.[7] The second prong of the strict scrutiny analysis requires that a state DOT's implementation of the Federal DBE Program be "narrowly tailored" to remedy identified discrimination in a particular state's transportation contracting and procurement market.[8]

The narrow tailoring requirement has several components. According to the Ninth Circuit in *Western States Paving*, a state must have evidence of discrimination within the state's own transportation contracting marketplace in order to determine whether or not there is the need for race- or gender-conscious remedial action.[9] Thus, mere compliance with the Federal DBE Program does not necessarily satisfy strict scrutiny.[10] Second, the court found that even where evidence of discrimination is present in a state, a narrowly tailored program should apply only to those minority groups who have actually suffered discrimination. For a specific minority group to be included in any race-conscious elements in a state's implementation of the Federal DBE Program, there must be evidence that the group suffered discrimination or its effects within the local marketplace.[11]

Federal courts have held that additional factors may also be pertinent in determining whether a state DOT's implementation of the Federal DBE Program is narrowly tailored: flexibility and duration of a race-conscious remedy, relationship of the numerical DBE goals to the relevant market, effectiveness of alternative race- and gender-neutral remedies, and impact of a race-conscious remedy on third parties.[12]

In *Western States Paving*, the United States intervened to defend the Federal DBE Program's facial constitutionality, and, according to the court, stated "that [the Federal DBE Program's] race conscious measures can be constitutionally applied only in those states where the effects of discrimination are present."[13] Accordingly, the USDOT has advised federal aid recipients that any use of race-conscious measures must be predicated on evidence that the recipient has concerning discrimination or its effects within the local transportation contracting marketplace.[14]

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[7] *Northern Contracting, Inc. v. Illinois DOT*, 473 F.3d 715, 721 (7th Cir. 2007), *reh'g and reh'g en banc denied* (7th Cir. 2007); *Western States Paving*, 407 F.3d at 991; *Sherbrooke Turf, Inc. v. Minnesota DOT and Gross Seed Co. v. Nebraska Dep't of Road*, 345 F.3d 964, 969 (8th Cir. 2003); *Adarand Constructors, Inc. v. Slater* (*Adarand VII*), 228 F.3d 1147, 1176 (10th Cir. 2000).

[8] *Western States Paving*, 407 F3d at 995-998; *Sherbrooke Turf*, 345 F.3d at 970-71.

[9] *Western States Paving*, 407 F.3d at 997-98, 1002-03.

[10] *Id.* at 995-1003. In the recent *Northern Contracting* decision (January 8, 2007), the Seventh Circuit held "that a state is insulated from [a narrow tailoring] constitutional attack, absent a showing that the state exceeded its federal authority. IDOT here is acting as an instrument of federal policy and Northern Contracting (NCI) cannot collaterally attack the federal regulations through a challenge to IDOT's program." 473 F.3d at 722. The Seventh Circuit distinguished both the Ninth Circuit decision in *Western States Paving* and the Eighth Circuit decision in *Sherbrooke Turf*, relating to an as-applied narrow tailoring analysis. The court held that IDOT's application of a federally mandated program is limited to the question of whether the state exceeded its grant of federal authority under the Federal DBE Program. Id. at 722. The court affirmed the district court upholding the validity of IDOT's DBE program.

[11] *Western States Paving*, 407 F.3d at 996-1000.

[12] *See, e.g.*, *id.* at 995; *Sherbrooke Turf*, 345 F.3d at 971; *Adarand VII*, 228 F.3d at 1181.

[13] *Western States Paving*, 407 F.3d at 996; *see also* Br. for the United States, at 28 (April 19, 2004).

[14] *DOT Guidance, available at* http://www.fhwa.dot.gov/civilrights/dbe_memo_a5.htm (January 2006).

Following *Western States Paving*, the USDOT has recommended the use of disparity studies by state DOTs to examine whether or not there is evidence of discrimination or its effects, and how remedies might be narrowly tailored in developing their DBE Program to comply with the Federal DBE Program.[15] The USDOT suggests consideration of both statistical and anecdotal evidence, which should be examined separately for each group presumed to be disadvantaged in 49 CFR Part 26.[16]

Therefore, Caltrans is engaging in a disparity study to comply with the federal regulations and the Federal DBE Program, based on the most recent authority regarding the Federal DBE Program.[17]

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[15] *Id.; see also* 42 CFR Section 26.45.

[16] *DOT Guidance, available at* http://www.fhwa.dot.gov/civilrights/dbe_memo_a5.htm (January 2006).

[17] *See Northern Contracting*, 473 F.3d 715; *Western States Paving*, 407 F.3d 983; *Sherbrooke Turf*, 345 F.3d 964; *Adarand VII*, 228 F.3d 1147.

APPENDIX C.
Availability Survey

This appendix describes study team steps to analyze MBE/WBE availability for transportation construction and engineering work in California. It expands on the analysis presented in Section II, explaining:

- Overall approach;
- Sample frame;
- Questionnaire development;
- Survey execution and performance;
- Statistical confidence in results; and
- Potential limitations.

Overall Approach

BBC contracted with Customer Research International (CRI) to conduct a telephone survey of business establishments. The business establishments surveyed were those identified in a Dun & Bradstreet (D&B) database as doing work in fields closely related to transportation construction and engineering. Only business establishments located in California were included in the survey. The study team attempted to contact every listing in a relevant SIC code rather than draw a sample of listings from the D&B databases. CRI attempted to reach nearly 50,000 business listings. The study team completed surveys with 18,675 business establishments, almost one-half of the establishments with valid phone listings (about 10,000 listings were non-working, duplicate or wrong numbers). After screening for qualifications and interest in future transportation construction and design work, and other factors, BBC was able to analyze MBE/WBE availability based on a database of 3,398 firms.

Sample Frame

BBC developed a sample frame of business establishments based on a D&B database of establishments doing business in California. The study team determined business specializations that accounted for most transportation construction and engineering work. BBC then identified the 4-digit and 8-digit Standard Industrial Classification (SIC) codes best corresponding to that work. D&B provided the list of firms in California with primary lines of business within those SIC codes. (BBC could purchase a list of business establishments by 4- and 8-digit SIC codes but not NAICS codes.)

The study team did not expect every firm in these lines of business to be available for transportation construction or engineering work. In some fields, we anticipated that relatively few firms would perform this work. In the same vein, the study team did not design the survey effort so that each firm possibly performing transportation construction or engineering work would be called as part of the survey. To do so would require including business sectors marginally related to transportation construction and design. Some firms within the core lines of work encompassed in the survey are also either missing from the D&B database or might not respond to the survey effort. Finally, only firms with California locations were included in the survey.

For these reasons, the survey is not a complete census of all firms possibly available for transportation contracting work in California. The study team's goal was to develop unbiased estimates of the relative availability of MBE/WBEs among firms doing business in California within the lines of work principally involved in transportation contracting.

Identifying the relevant subindustries for Caltrans transportation contracting. BBC determined the types of firms involved in Caltrans transportation construction and engineering services by reviewing firms listed in Caltrans databases for construction and design contracts.

- From Caltrans Division of Engineering Services electronic data, BBC was able to identify firms bidding as prime contractors and first-tier subcontractors on Caltrans construction projects from 2002 to mid-2006. Although these electronic files lacked reliable contract dollar amounts, BBC was able to match names and addresses of these firms against the D&B database of California firms in order to reveal the 8-digit SIC codes for these firms. BBC also examined the types of suppliers and truckers involved in transportation construction.
- For engineering services, BBC identified relevant SIC codes for matched firms from a Caltrans Division of Procurement and Contracts (DPAC) database of prime consultants and select subconsultants receiving Caltrans engineering services and related contracts from 2002 through mid-2006.

The 8-digit SIC codes have been developed by D&B to provide more-precise definitions of firm specializations than the 4-digit SIC codes or the NAICS codes that have been prepared by the federal government. (Note that for some firms, D&B only has the less-specific 4-digit SIC code.) These SIC codes can be translated into NAICS codes as well.

Figure C-1, on the following page, lists the SIC codes for construction-related firms included in the telephone survey. Figure C-1 also identifies the number of business listings by major field in the D&B database. Figure C-2 on page 4, contains similar information for engineering-related fields.

List of establishments to be contacted. Each business establishment with the corresponding SIC code in California for which D&B had a phone number was included in the list purchased from D&B. There was no "sampling" of business establishments from the sample frame.

In the Scope of Services for the Caltrans study, BBC proposed to include 24,000 firms in the telephone survey. The actual survey encompassed many more business establishments. BBC purchased 49,276 listings of business establishments to be contacted as part of the Availability Survey. This includes 32,055 construction-related establishments and 17,221 engineering-related establishments.

Because D&B organizes its database by "business establishment," not by "firm," BBC purchased the business listings in that fashion. Therefore, multiple California locations for a single firm were obtained in the list of establishments to be called. The study team attempted to contact each establishment by telephone. (BBC's methods for consolidating information for multiple establishments into a single record for a firm are described later in this appendix.)

Figure C-1.
Subindustries surveyed in transportation construction fields

				Number of Business Establishments
Highway and street construction				**2,434**
1611-9901	General contractor, highway and street	1611-9902	Highway and street maintenance	
1611-0200	Surfacing and paving	1611-0205	Resurfacing contractor	
1611-0000	Highway and street construction	1611-0207	Gravel or dirt road construction	
1611-0203	Grading	1611-0102	Highway and street sign installation	
1611-0204	Highway and street paving contactor	1611-0100	Highway signs and guardrails	
1611-0202	Concrete construction: roads, highways	1611-0101	Guardrail construction, highways	
Bridge, tunnel and elevated highway construction				**116**
1622-0000	Bridge, tunnel and elevated highway	1622-9903	Tunnel construction	
1622-9901	Bridge construction	1622-9904	Viaduct construction	
1622-9902	Highway construction, elevated			
Water, sewer and utility lines				**1,205**
1623-0000	Water, sewer and utility lines	1623-0201	Cable laying construction	
1623-9906	Underground utilities contractor	1623-0103	Oil and gas pipeline construction	
1623-0302	Sewer line construction	1623-9901	Electric power line construction	
1623-9904	Pipeline construction	1623-9903	Pipe laying construction	
1623-0300	Water and sewer line construction	1623-9902	Manhole construction	
1623-0203	Telephone and communication line construction	1623-0101	Gas main construction	
1623-0303	Water main construction	1623-0301	Aqueduct construction	
Electrical work				**9,713**
1731-0000	Electrical work	1731-0200	Electronic controls installation	
1731-9903	General electrical contractor	1731-0302	Fiber optic cable installation	
1731-0300	Communications specialization	1731-0201	Computerized controls installation	
1731-0100	Electric power systems contractors	1731-0103	Standby or emergency power specialization	
1731-9904	Lighting contractor			
Concrete work				**4,103**
1771-0000	Concrete work	1771-0103	Gunite contractor	
1771-9901	Concrete pumping	1771-9905	Patio construction, concrete	
1771-0301	Blacktop (asphalt) work	1771-0102	Grouting work	
1771-9904	Foundation and footing contractor	1771-0303	Parking lot construction	
1771-0300	Driveway, parking lot and blacktop	1771-0201	Curb construction	
1771-9902	Concrete repair	1771-0202	Sidewalk contactor	
Structural steel erection				**552**
1791-0000	Structural steel erection	1791-9909	Storage tanks, metal: erection	
1791-9905	Iron work, structural	1791-9907	Precast concrete structural framing or panels, placing of	
1791-9902	Concrete reinforcement, placing of			
1791-9901	Building front installation, metal			
Water well drilling				**370**
1781-0000	Water well drilling			
1781-9902	Servicing, water wells			
Excavation work				**1,843**
1794-0000	Excavation work			
1794-9901	Excavation and grading, building construction			
Wrecking and demolition				**480**
1795-9902	Demolition, buildings and other structures	1795-9901	Concrete breaking for streets and highways	
1795-0000	Wrecking and demolition work			
1795-9903	Dismantling steel oil tanks			

Note: 8-digit SIC codes were developed by Dun & Bradstreet.

Source: BBC Research and Consulting from Dun & Bradstreet Marketplace, 2006.

Figure C-1. (continued)
Subindustries surveyed in transportation construction fields

				Number of Business Establishments
Asphalt paving mixtures and blocks				**127**
2951-0000	Asphalt and paving mixtures and blocks			
2951-0201	Asphalt and asphaltic paving mixtures (not from refineries)			
Construction sand and gravel				**129**
1442-0000	Construction sand and gravel	1442-0102	Construction sand mining	
1442-0201	Gravel mining	1442-0100	Sand mining	
1442-0101	Common sand mining	1442-0200	Gravel and pebble mining	
Ready-mixed concrete				**525**
3273-0000	Ready-mixed concrete			
All trucking				**9,544**
4212-0000	Local trucking, without storage	4213-9902	Building materials transport	
4213-0000	Trucking, except local	4213-9905	Heavy machinery transport, local	
4212-9905	Dump truck haulage	4212-0202	Petroleum haulage, local	
4213-9904	Heavy hauling, nec	4213-9908	Liquid petroleum transport, non-local	
4212-9907	Hazardous waste transport	4212-9904	Draying, local: without storage	
4212-0201	Liquid haulage, local	4212-0200	Liquid transfer services	
4212-9908	Heavy machinery transport, local	4212-9912	Steel hauling, local	
4213-9909	Mobile homes transport			
Heavy construction equipment rental				**887**
7353-0000	Heavy construction equipment rental	7353-0101	Oil field equipment, rental or leasing	
7353-9901	Cranes and aerial lift equipment, rental or leasing	7353-0100	Oil equipment rental services	
7353-9902	Earth moving equipment, rental or leasing	7353-0102	Oil well drilling equipment, rental or leasing	

Note: 8-digit SIC codes were developed by Dun & Bradstreet.

Source: BBC Research and Consulting from Dun & Bradstreet Marketplace, 2006.

Figure C-2.
Subindustries surveyed in transportation engineering fields

SIC Code	SIC description	Number of Business Establishments
0711-9906	Soil testing services	29
0781-0201	Landscape architects	717
0781-0000	Landscape counseling and planning	418
7389-0200	Inspection and testing services	642
7389-0800	Mapmaking services	29
7389-0801	Mapmaking or drafting, including aerial	36
8711-0000	Engineering services	4,457
8711-9903	Consulting engineering	2,403
8711-0402	Civil engineering	1,070
8711-9905	Electrical or electronic engineering	600
8711-0404	Structural engineering	568
8711-0401	Building construction consultant	343
8711-0400	Construction and civil engineering	197
8711-9901	Acoustical engineering	68
8711-0101	Pollution control engineering	31
8712-0101	Architectural engineering	304
8713-0000	Surveying services	634
8731-0302	Environmental research	161
8733-0201	Archeological expeditions	27
8734-0000	Testing laboratories	591
8734-0300	Pollution testing	25
8734-9909	Soil analysis	27
8734-0301	Hazardous waste testing	23
8741-9902	Construction management	885
8742-0402	Construction project management	267
8742-0410	Transportation consultant	231
8744-9904	Environmental remediation	79
8748-9905	Environmental consultant	1,674
8748-0200	Urban planning and consulting services	252
8748-0204	Traffic consultant	88
8999-0700	Earth science services	186
8999-0701	Geological consultant	159

Note: 8-digit SIC codes were developed by Dun & Bradstreet.

Source: BBC Research and Consulting from Dun & Bradstreet Marketplace, 2006.

Questionnaire Development

Development of survey instrument. The study team drafted a telephone survey to collect business information from transportation construction and engineering firms. Before this survey was used in the field, Caltrans staff reviewed the survey instrument, and it was tested in a pilot survey. The basic survey document for construction firms is provided in Figure C-5 at the end of this appendix. The survey was slightly modified for certain groups of firms based on line of work in order to use the terms commonly employed in those fields. For example, the words "prime consultant" and "subconsultant" were substituted for "prime contractor" and "subcontractor" when surveying engineering-related firms.

A fax version of the survey was also developed. This version was faxed or e-mailed to firm owners or managers initially contacted by telephone who requested that a survey be faxed or e-mailed to them. They then returned the survey to BBC via fax or e-mail.

Survey structure. The telephone and fax/e-mail surveys included the following sections. Note that each area of questions was asked of all firms. Interviewers did not know ownership status when calling a firm. (Beginning on page 14, Figure C-5 reproduces the survey instrument in its entirety.)

Identification of purpose. The survey began by identifying the California Department of Transportation as the survey sponsor and describing the purpose of the study (identifying firms doing transportation construction or engineering work in California).

Verification of correct firm name. The interviewer verified that he or she had reached the correct business, and if not, inquired about the correct contact information for that business. When the firm name was not correct, interviewers asked if the respondent knew how to contact the company. The BBC study team followed up with the desired company based on the new contact information (see areas "X" and "Y" of the Availability Survey in Figure C-5).

Performance of transportation construction or engineering work. Firms were asked, "First, I want to confirm that your firm does work related to transportation construction, maintenance or design. Is this correct?" Interviewers continued with firms responding "yes" to this question (Question A1). BBC instructed interviewers that "doing work" included trying to sell this work.

Verification of for-profit business status. The interviewer also asked whether the organization was a for-profit business as opposed to a government or not-for-profit entity (Question A2). Interviewers continued with firms responding "yes" to this question.

Confirmation of main line of business. Firms were asked to confirm industry classification from the D&B database (Question A3). Firms seeking to change or clarify this description were then asked to identify their main line of business (Question A4). (After the survey was complete, BBC coded the new information on main line of business into appropriate SIC codes.)

Sole location, or multiple locations. Because the study team surveyed business establishments, business owners and managers were asked if they had other locations in California (Questions A5–A6). They were also asked if the establishment was an affiliate or subsidiary of another firm (Questions A8–A9). (A discussion of how BBC consolidated this information into a single response for a firm is presented later in this appendix.)

Past bids or work with Caltrans, local governments and the private sector. The survey inquired about bids for or work on past Caltrans, local government and private sector transportation projects. This area of questions asked whether the firm had bid or worked as a prime contractor or as a subcontractor or supplier (Questions B1–B12).

Qualifications and interest in future transportation work. Firm representatives were asked about their qualifications and interest in future transportation work. The survey questions asked 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/or as a subcontractor (Questions B13–B14).

Largest contracts. Interviewers asked firms to identify the largest transportation-related contract or subcontract they had been awarded in California in the past five years. They were also asked about the largest contract or subcontract that they had bid on in California in the past five years (Questions D2–D4).

Geographic areas. Interviewers asked a series of questions to identify the geographic areas in which the firm could work. These geographic areas included counties and regions of the state that correspond to Caltrans districts (Questions C3–C16).

Ownership. Firms were asked whether they were at least 51 percent owned and controlled by women and/or minorities (Questions E1–E3).

Certification. All firms were asked if they were certified as a DBE and whether they were certified as a small business enterprise by the State of California (Questions E4–E5).

Business background. Several questions collected information on age of the firm (Question D4), 2005 revenues and number of employees (Questions F1–F6). For firms with multiple establishments in California, the survey also asked about revenue and employee numbers for all of these locations.

Comments about the marketplace and doing business with Caltrans. Near the end of the survey, interviewers asked two open-ended questions concerning general insights on the marketplace (Question G1) and fairness of Caltrans prime contractor contracting practices (Question G2).

Contact information. The survey concluded by collecting complete contact information for the establishment (Questions H1–H6).

Survey Execution and Performance

Interviewers. BBC contracted with Customer Research International (CRI) to conduct the telephone survey. BBC held a training session with interviewers at CRI offices in San Marcos, Texas before starting these interviews. CRI programmed and conducted the interviews and provided daily reports on results. BBC instructed CRI to make up to at least five attempts to reach a person at each phone number. This design is intentionally persistent to minimize non-response.

BBC instructed CRI staff to identify and interview an available company representative such as the owner, manager, chief financial officer or other key official who could answer questions about the company's line of business, past contracts, financial and employment figures, interest in work with various clients, and ownership status. The survey was conducted in fall 2006. BBC collected faxed or e-mailed survey responses through December 2006.

Survey performance. The survey process began with a very large number of D&B business listings for organizations in California in certain lines of work potentially related to transportation construction and engineering. At the end of the survey analysis process, firms reporting that they are available for, had bid on, or had performed transportation construction or engineering work were included in the database used for the availability analysis.

Valid business listings. Some of the business listings purchased from D&B were:

- Duplicate numbers (1,335 listings);
- Non-working phone numbers (4,814 listings); or
- Wrong numbers for the desired businesses
  (3,216 listings that could not be reached through follow-up calls).

Figure C-3, on the following page, shows how the beginning set of 49,276 listings was reduced to 39,911 because of these factors. Some non-working phone numbers and some wrong numbers for the desired businesses reflect firms going out of business or changing their names and phone numbers between the time that D&B listed them in its database and the time when the study team attempted to contact them.

Figure C-3 also shows the final disposition of the 39,911 business establishments that CRI attempted to contact:

- Slightly more than one-third of these business establishments could not be reached after a minimum of five phone calls (14,221 establishments). Call-backs to these business establishments were made at different times of day and different days of the week in order to maximize response.
- About 5 percent of these business establishments could not provide a staff member to answer the survey after a minimum of five phone calls (2,096 establishments).
- Surveys were only conducted in English. About 2 percent of these business establishments could not communicate with the interviewer due to language barriers (790 establishments).
- Four percent refused to participate in the interview (1,731 establishments).
- About 6 percent asked the study team to send the survey via fax or e-mail but did not successfully obtain the fax or e-mail (after multiple attempts) or received the survey but did not return a completed survey to BBC (2,398 establishments).

In sum, BBC obtained completed surveys from 18,675 business establishments, or about 47 percent of the business establishments with valid phone listings. This level of response to a business survey is relatively high. The very large number of responses and the high response rate add to the statistical validity of the study.

Figure C-3. Disposition of attempts to survey D&B business listings

Note:
* After multiple attempts to complete survey.

Source:
BBC Research & Consulting from 2006 Availability Survey.

	Number of Firms	Percent of Business Listings
Beginning List	**49,276**	
Less duplicate numbers	1,335	
Less non-working phone numbers	4,814	
Less wrong number/business	3,216	
Business listings contacted	**39,911**	
Less no answers*	14,221	35.63%
Less couldn't reach responsible staff member*	2,096	5.25%
Less language barriers*	790	1.98%
Less refused to answer	1,731	4.34%
Less unreturned fax/e-mail*	2,398	6.01%
Firms that completed surveys	**18,675**	**46.79%**

Firms that report being available for transportation construction and engineering work. Among the D&B listings successfully contacted, only a portion is deemed available for any type of Caltrans or local government transportation construction and engineering work, as explained below:

- Two-thirds of the firms that completed a survey indicated they did not perform transportation construction, maintenance or design work (12,620 establishments). The survey ended when a business owner or manager reported that the business did not do this type of work.
- About 1 percent of the surveyed establishments were excluded because they were an organization other than a for-profit business (168 establishments). Non-profit and public sector agencies were not to be included in the survey as the availability analysis focuses on for-profit firms. The survey ended when a respondent reported that the establishment was something other than a for-profit business.
- About 1 percent of surveyed establishments indicated that they were involved in transportation construction, maintenance or design work but reported main lines of work that were well outside the scope of the Availability Survey (180 establishments). For example, some firms identified by D&B as highway construction or concrete firms reported in the survey that they did transportation construction-related work, but that their primary line of business was single family homebuilding or other specialty outside the scope of the study. CRI completed the full survey with these firms. Prior to analyzing results, BBC excluded them from the final data set.
- About 300 individual establishments of multi-location firms completed the survey. Prior to analyzing results, BBC collapsed responses from these multiple establishments into a single response (described below). This removed 183 survey records from the data set (1 percent of total completed surveys).

- Nearly 400 additional firms were eliminated from the count of firms available for Caltrans or local agency transportation projects because they said they were not interested in either prime contracting or subcontracting opportunities on such projects.
- Approximately 1700 firms who were interested in future projects in California were eliminated from the count of firms available for Caltrans and local agency transportation projects because they had never bid or received award for similar projects in any sector in California.
- Twenty firms were eliminated from the count of firms available for Caltrans and local agency work because they did not provide valid responses to the questions about geographic scope.

After these exclusions, the survey effort produced a database of 3,398 for-profit firms in California that were in the lines of business pertinent to the survey and reported they did work related to transportation construction, maintenance or design (see Figure C-4). This data set is large relative to data typically used in economic or other social science research.

Figure C-4. Screening of completed business telephone interviews for possible inclusion in the availability analysis

Source:
BBC Research & Consulting from 2006 Availability Survey.

	Number of Firms	Percent of Business Listings
Firms that completed surveys	**18,675**	**100.0%**
Less no transportation work	12,620	67.6%
Less not a business	168	0.9%
Less line of work outside of scope	180	1.0%
Less multiple establishments	183	1.0%
Firms available for transportation work	**5,524**	**29.6%**
Less no interest in furture work	398	
Less no past bid/award	1,708	
Less missing geographic scope	20	
Total	**2,126**	
Firms available for Caltrans and local agency work	**3,398**	

Study team identification and coding of responses from multi-location firms. Multiple responses from different establishments operating under the same firm name were combined into a single, summary case according to the following rules:

- If any of the establishments reported bidding or working on a contract within a particular sector, the firm summary for that variable was coded to an affirmative response for the corresponding sector;
- The types of work (prime contractor, subcontractor, supplier, trucker) that establishments reported were summed to a single variable, again corresponding to the appropriate sector; and
- If any establishment said that it was interested and able to work within one of the ten geographic regions (see part C of the survey instrument in Figure C-5), the firm summary reflected that geographic scope.

Except when there was a 50-year discrepancy among the individual in a set of establishments' self-reported founding dates, the firm summary variable matches the median founding date provided by the multiple establishments. The firm summary variables for contract sizes and California-wide revenue are equivalent to the largest dollar amounts indicated by any of its establishments. The summary number of firm employees in California is equal to the most common or the mean response of the multiple establishments. Finally, firms with multiple locations were recoded as woman- or minority-owned, DBE, or certified small businesses if the majority of duplicate establishments indicated such status.

Statistical Confidence in Results

BBC calculated confidence intervals for the MBE/WBE availability estimates. Because of the large sample relative to the population of firms, BBC employed a finite population correction factor in determining the standard errors and confidence intervals around these estimates from the Availability Survey. The 95 percent confidence interval for MBE/WBE availability across all industries and roles is +/- 0.6 percentage points.

Potential Limitations

The study team explored several possible limitations in its approach to estimating relative availability. These include:

- Assessing relative MBE/WBE availability and not providing a count of all firms available for transportation construction and engineering work;
- Use of a telephone survey of firms as an approach to determining relative MBE/WBE availability for a state DOT's contracts;
- Use of D&B as the sample frame;
- Selection of specific SIC codes to define the sample frame;
- Non-response bias; and
- Reliability of answers to survey questions.

Not providing a count of all firms available for Caltrans work. The purpose of the survey is to estimate the *percentage* of firms available for transportation construction and engineering work that are minority- and women-owned and controlled (i.e., "relative" MBE/WBE availability). The survey provides such information. The survey does not provide a comprehensive listing of every firm available for transportation work and should not be used as such.

Such a comprehensive listing is not possible because firms do not need to pre-qualify or pre-register to perform Caltrans transportation contracting work. Even if such a list existed, there could be firms available for Caltrans work that had not taken steps to place their business on the list.

The survey approach of measuring relative availability has been approved by federal courts (see, for example, the Seventh Circuit decision on *Northern Contracting*) when considering state implementation of the Federal DBE Program.[1] Use of a survey is recommended as an approach to measuring availability in the USDOT guidance on goal-setting.[2]

Use of a telephone survey. USDOT guidance for determining relative availability of DBEs mentions simply dividing the number of firms in an agency's DBE directory by the total firms in the marketplace, as reported in U.S. Census data. As another option, the USDOT suggests using a list of pre-qualified firms or a bidder list to analyze the relative availability of DBEs for an agency's contracts and subcontracts.

There are several reasons the study team rejected these approaches:

- Dividing a simple count of certified DBEs by a U.S. Census count of total firms does not provide the data on firm characteristics the study team desired for this Availability and Disparity Study. For example, the survey provides additional data on individual firms' qualifications and interest in transportation work.
- As mentioned previously, Caltrans does not typically pre-qualify firms to bid as prime contractors or subcontractors, especially for construction contracts. There is no comprehensive pre-qualification list.
- Although Caltrans has attempted to develop a bidder list, initial efforts have been relatively unsuccessful. Firms are not required to be on the Caltrans bidders list to compete for Department prime contracts and subcontracts.
- A "custom census" approach to measuring availability that starts with D&B data has been positively reviewed by the court cases involving DBE goal setting for state departments of transportation (see, for example, *Northern Contracting* in Appendix C).

The methodology applied in the Caltrans study takes this "custom census" approach and adds several layers of refinement in more precisely measuring MBE/WBE availability.

For all of these reasons, the study team selected use of a telephone survey.

[1] *N. Contracting, Inc. v. Illinois DOT,* 473 F.3d 715 (7th Cir. 2007)

[2] USDOT. *Tips for Goals Setting in the Disadvantaged Business Enterprise (DBE) Program* (http://osdbu.dot.gov/?TabId=133)

Use of D&B data as the sample frame. Dun & Bradstreet provides the most comprehensive private database of business listings in the United States. Even so, this database does not include all establishments operating in California:

- **New firms.** There can be a lag between formation of a new business and inclusion in the database. This means that the newest firms are underrepresented in the sample frame. Based on the firms successfully interviewed in the Availability Surveys, newly formed firms are more likely than older firms to be minority- or women-owned, which suggests that MBEs and WBEs might be underrepresented in the final database of surveyed firms.
- **Home-based businesses.** The D&B database is more likely to miss a business working out of the home than a firm with a distinct business office. Small, home-based firms are more likely than large firms to be minority- or women-owned, which again suggests that MBEs and WBEs might be underrepresented in the final survey data set.

Selection of specific SIC codes to define the sample frame. Defining an industry based on specific SIC codes (or NAICS codes) is a standard step when analyzing an economic sector. Government and private sector economic data are typically organized according to these industry codes. As with any such research, there are limitations when choosing the specific SIC codes to define the sample frame for an industry survey.

First, it was not possible for BBC to include all lines of work possibly related to transportation construction and engineering in the Availability Survey without surveying nearly every industry in California. In addition, the availability analysis and utilization analysis were conducted concurrently in this study. At the time the sample frame was developed in August 2006, BBC had limited information on the business specializations involved in Caltrans transportation construction and engineering work.

Both of these potential limitations have negligible effect on the availability analysis. Post-survey comparison of the SIC codes for firms receiving Caltrans prime contracts and subcontracts found that the lines of work included in the survey accounted for 85.6 percent of total dollars of Caltrans work from 2002 through 2006. Surveying firms in additional SIC codes would be unlikely to have a material effect on the availability estimates.

A further limitation to the use of SIC codes to classify businesses, or any other work type classification method, is that some SIC codes are imprecise and overlap with other business specialties. Even though BBC used D&B's own 8-digit SIC codes, D&B does not maintain a detailed 8-digit code for each firm in its database. In addition, businesses often span several types of work, even at the 4-digit SIC code level of specificity. This overlapping makes classifying businesses into a single line of business difficult and imprecise. When firm owners and managers were asked to identify primary lines of business, they often gave broad answers. For these reasons, BBC collapsed many of the SIC codes into broader work categories in the final database of firms available for transportation-related work. This presents a more accurate assessment of MBE/WBE availability by work field than possible at a finer level of detail. However, this approach sacrifices the ability to separate relatively narrow areas of expertise such as traffic control or guardrail work (which was not possible to obtain from the D&B information).

Non-response bias. Analysis of non-response bias considers whether firms not successfully surveyed are different from those successfully surveyed and included in the final data set for analysis. There are opportunities for non-response bias in any survey. The study team considered the potential for non-response bias due to:

- Survey sponsorship;
- Work specializations; and
- Language barriers.

Survey sponsorship and introduction. Interviewers introduced the survey by identifying Caltrans as the survey sponsor in order to encourage firms that performed transportation construction and engineering work to participate in the interview. Firms would be less likely to answer somewhat sensitive business questions asked by an interviewer unable to identify the sponsor of the survey. In fact, some firms asked to check with Caltrans to verify its sponsorship prior to answering the survey.

Analysis of survey refusal rates suggests that sponsorship had an overwhelmingly positive effect on response rates. Only 4 percent of business listings potentially contacted refused to answer the survey.

Work specializations. Businesses in highly-mobile fields, such as trucking, may be more difficult to reach than firms more likely to work out of a fixed office (e.g., engineering firms). This suggests that survey response rates will differ by business specialization.

If all surveyed firms were simply counted to determine relative MBE/WBE availability, this would lead to estimates that relied too heavily on fields that could be easily contacted by telephone. This potential non-response bias is minimal in this study because the availability analysis compares firms within work fields before determining an MBE/WBE availability figure. In other words, the potential for trucking firms to be less likely to complete a survey is less important because the number of MBE/WBE trucking firms completing surveys is compared with total number of trucking firms, not all firms across all fields.

Language barriers. Caltrans contracting documents are in English and not other languages. The study team made the decision to only include businesses able to complete the survey in English in the availability analysis so to remove language barriers as a potential explanation for any differences in outcomes observed between MBE/WBEs and majority-owned firms.

Individuals who could not communicate in English well enough to complete the survey and could not locate another individual to answer survey questions in English were not captured in the survey research. Further investigation found that the majority of these spoke Spanish and a smaller proportion spoke an Asian language. Choosing to conduct the study in English and not translate it into other languages may have an effect on the relative number of Hispanic- and Asian-Pacific-owned firms that completed the survey.

Response reliability. Firm owners and managers were asked questions that may be difficult to answer, including firm revenues and employment. For this reason, the study team prompted them with D&B information for their establishment and asked them to confirm that information or provide more accurate estimates. Further, respondents were typically not asked to give absolute

figures for difficult questions such as firm revenues. Rather, they were given ranges of dollar figures or employment levels.

BBC explored reliability by analyzing consistency of survey responses for the firm revenues and firm employment questions. BBC found survey responses to these difficult questions to be internally consistent. Firms with smaller employee numbers reported revenues consistent with their employment levels.

Summary

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 is not a standard Caltrans practice; or (c) a bidders list, which has not yet been successfully implemented by Caltrans.

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

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 reported by D&B to have a primary line of business 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 attempted to contact nearly 50,000 business listings, about 10,000 of which were found to be invalid listings. A relatively high proportion of the remaining establishments were successfully contacted, and more than 18,000 business establishments completed the survey.

BBC examined several potential sources of non-response bias. It is possible that MBEs and WBEs were somewhat under-represented in the final database of available firms. However, BBC concludes that this potential under-representation of MBE/WBEs does not significantly affect the analyses.

Figure C-5.
Survey Instrument

Hello. My name is [*interviewer name*] from Consumer Research International. We are calling for the California Department of Transportation. The Department is developing a comprehensive list of companies involved in transportation construction, maintenance, and design. Whom can I speak with to get the information we need from your firm?

After reaching an appropriately senior staff member, the interviewer should re-introduce the purpose of the survey and begin with questions.

X1. I have a few basic questions about your company and the type of work you do. Can you confirm that this is [*firm name*]?

1=RIGHT COMPANY

2=NOT RIGHT COMPANY

3=REFUSE TO GIVE INFORMATION

Y1. Can you give me any information about [*firm name*]?

1=Yes, same owner doing business under a different name

2=Yes, can give information about named company

3=Company bought/sold/changed ownership

4=No, does not have information

5=Refused to give information

Y1. ENTER NEW NAME

1=VERBATIM

Y2. Can you give me the phone number of [*firm name*]?

(ENTER UPDATED PHONE OF NAMED COMPANY)

1=VERBATIM

Y3. Can you give me the complete address or city for [*firm name*]?

INTERVIEWER - RECORD IN THE FOLLOWING FORMAT:

. STREET ADDRESS

. CITY

. STATE

. ZIP

1=VERBATIM

Y4. And what is the new name of the business that used to be [*firm name*]?

(ENTER UPDATED NAME)

1=VERBATIM

Y5. Can you give me the name of the owner or manager of the new business?

(ENTER UPDATED NAME)

1=VERBATIM

Y6. Can I have a telephone number for them?

(ENTER UPDATED PHONE)

1=VERBATIM

Y7. Can you give me the complete address or city for [*new firm name*]?

1=VERBATIM

Y8. Do you work for this new company?

1=YES - CONTINUE

2=NO - TERMINATE

A1. First, I want to confirm that your firm does work related to transportation construction, maintenance or design. Is this correct?

(NOTE TO INTERVIEWER) - such as, road, bridge or highway construction, guardrail installation, paving and striping work, supplying materials used on these projects, providing trucking or hauling services

(NOTE TO INTERVIEWER) - includes having done work or trying to sell this work

1=Yes

2=No - TERMINATE

A2. Let me confirm that [*firm name* / *new firm name*] is a business, as opposed to a non-profit organization, a foundation or a government office. Is that correct?

1=Yes, a business

2=No, other - TERMINATE

A3. Let me also confirm what kind of business this is. The information we have from Dun & Bradstreet indicates that your main line of business is [*SIC Code description*]. Is this correct?

(NOTE TO INTERVIEWER - IF ASKED, DUN & BRADSTREET OR D&B, IS A COMPANY THAT COMPILES BUSINESS INFORMATION THROUGHOUT THE COUNTRY)

1=Yes – SKIP TO A5

2=No

98=(DON'T KNOW)

99=(REFUSED)

A4. What would you say is the main line of business at [*firm name* / *new firm name*]?

(ENTER VERBATIM RESPONSE)

1=VERBATIM

A5. Is this the sole location for your business, or do you have offices in other locations?

1=Sole location – SKIP TO A8

2=Have other locations

98=(DON'T KNOW)

99=(REFUSED)

A6. How many other offices in California?

(ENTER NUMBER OF OFFICES)

(998 = DON'T KNOW)

(999 = REFUSED)

1=NUMERIC (1-999)

A7. Is your company headquartered in California?

1=Yes

2=No

98=(DON'T KNOW)

99=(REFUSED)

A8. Is your company a subsidiary or affiliate of another firm?

1=Independent – SKIP TO B1

2=Subsidiary of another firm

3=Affiliate

98=(DON'T KNOW)

99=(REFUSED)

A9. What is the name of your parent company?

1=ENTER NAME

98=(DON'T KNOW)

99=(REFUSED)

A9. ENTER NAME OF PARENT COMPANY

1=VERBATIM

B1. Next, I have a few questions about your company's role in transportation construction, maintenance or design work. During the past five years, has your company submitted [*a bid* or *qualifications, a proposal* or a *price quote]* for any part of a Caltrans project?

1=Yes

2=No – SKIP TO B3

98=(DON'T KNOW) – SKIP TO B3

99=(REFUSED) – SKIP TO B3

B2. Was that [*a bid / a proposal*] or price quote to work as [*a prime contractor, a subcontractor, or a supplier?* or *a prime consultant or subconsultant?*]

1=Prime contractor/consultant
2=Subcontractor/consultant
3=Supplier (or manufacturer)
4=Prime and Sub
5=Sub and Supplier
6=Prime and Supplier
7=Prime, Sub, and Supplier
8=Trucker
10=(Supplier and Trucker)
11=(Prime and Trucker)
12=(Sub and Trucker)
13=(Prime, Supplier, and Trucker)
14=(Sub, Supplier, and Trucker)
15=(Prime, Sub, and Trucker)
16=(Prime, Sub, Supplier, Trucker)
98=(DON'T KNOW)
99=(REFUSED)

B3. During the past five years, has your company received an award for work [*as a prime contractor or as a subcontractor* or *as a prime consultant or as a subconsultant*] to any part of a Caltrans project?

1=Yes
2=No – SKIP TO B5
98=(DON'T KNOW) – SKIP TO B5
99=(REFUSED) – SKIP TO B5

B4. Was that an award to work as [*a prime contractor, a subcontractor, or a supplier? / a prime consultant or subconsultant?*]

1=Prime contractor/consultant
2=Subcontractor/consultant
3=Supplier (or manufacturer)
4=Prime and Sub
5=Sub and Supplier
6=Prime and Supplier
7=Prime, Sub, and Supplier
8=Trucker
10=(Supplier and Trucker)
11=(Prime and Trucker)
12=(Sub and Trucker)
13=(Prime, Supplier, and Trucker)
14=(Sub, Supplier, and Trucker)
15=(Prime, Sub, and Trucker)
16=(Prime, Sub, Supplier, Trucker)
98=(DON'T KNOW)
99=(REFUSED)

B5. During the past five years, has your company submitted [*a bid / qualifications, a proposal*] or a price quote for any part of a city, county, or local agency transportation project in California?

1=Yes

2=No – SKIP TO B7

98=(DON'T KNOW) – SKIP TO B7

99=(REFUSED) – SKIP TO B7

B6. Was that [*a bid / a proposal*] or price quote to work as [*a prime contractor, a subcontractor, or a supplier? / a prime consultant or subconsultant?*]

1=Prime contractor/consultant

2=Subcontractor/consultant

3=Supplier (or manufacturer)

4=Prime and Sub

5=Sub and Supplier

6=Prime and Supplier

7=Prime, Sub, and Supplier

8=Trucker

10=(Supplier and Trucker)

11=(Prime and Trucker)

12=(Sub and Trucker)

13=(Prime, Supplier, and Trucker)

14=(Sub, Supplier, and Trucker0

15=(Prime, Sub, and Trucker)

16=(Prime, Sub, Supplier, Trucker)

98=(DON'T KNOW)

99=(REFUSED)

B7. During the past five years, has your company received an award for work [*as a prime contractor or as a subcontractor / as a prime consultant or as a subconsultant*] to any part of a city, county, or local transportation agency project in California?

1=Yes

2=No – SKIP TO B9

98=(DON'T KNOW) – SKIP TO B9

99=(REFUSED) – SKIP TO B9

B8. Was that an award to work as [*a prime contractor, a subcontractor, or a supplier? / a prime consultant or subconsultant?*]

1=Prime contractor/consultant
2=Subcontractor/consultant
3=Supplier (or manufacturer)
4=Prime and Sub
5=Sub and Supplier
6=Prime and Supplier
7=Prime, Sub, and Supplier
8=Trucker
10=(Supplier and Trucker)
11=(Prime and Trucker)
12=(Sub and Trucker)
13=(Prime, Supplier, and Trucker)
14=(Sub, Supplier, and Trucker)
15=(Prime, Sub, and Trucker)
16=(Prime, Sub, Supplier, Trucker)
98=(DON'T KNOW)
99=(REFUSED)

B9. During the past five years, has your company submitted [*a bid / qualifications, a proposal*] or a price quote for any part of a private sector transportation project in California?

1=Yes
2=No – SKIP TO B11
98=(DON'T KNOW) – SKIP TO B11
99=(REFUSED) – SKIP TO B11

B10. Was that [*a bid / a proposal*] or price quote to work as [*a prime contractor, a subcontractor, or a supplier? / a prime consultant or subconsultant?*]

1=Prime contractor/consultant
2=Subcontractor/consultant
3=Supplier (or manufacturer)
4=Prime and Sub
5=Sub and Supplier
6=Prime and Supplier
7=Prime, Sub, and Supplier
8=Trucker
10=(Supplier and Trucker)
11=(Prime and Trucker)
12=(Sub and Trucker)
13=(Prime, Supplier, and Trucker)
14=(Sub, Supplier, and Trucker)
15=(Prime, Sub, and Trucker)
16=(Prime, Sub, Supplier, Trucker)
98=(DON'T KNOW)
99=(REFUSED)

B11. During the past five years, has your company received an award for work [*as a prime contractor or as a subcontractor / as a prime consultant or as a subconsultant*] to any part of a private sector transportation project in California?

1=Yes

2=No – SKIP TO B13

98=(DON'T KNOW) – SKIP TO B13

99=(REFUSED) – SKIP TO B13

B12. Was that an award to work as [*a prime contractor, a subcontractor, or a supplier? / a prime consultant or subconsultant?*]

1=Prime contractor/consultant

2=Subcontractor/consultant

3=Supplier (or manufacturer)

4=Prime and Sub

5=Sub and Supplier

6=Prime and Supplier

7=Prime, Sub, and Supplier

8=Trucker

10=(Supplier and Trucker)

11=(Prime and Trucker)

12=(Sub and Trucker)

13=(Prime, Supplier, and Trucker)

14=(Sub, Supplier, and Trucker)

15=(Prime, Sub, and Trucker)

16=(Prime, Sub, Supplier, Trucker)

98=(DON'T KNOW)

99=(REFUSED)

B13. Now, thinking about future transportation work, is your company qualified and interested in working with Caltrans or local governments in California [*a prime contractor? / a prime consultant?*]

1=Yes (BOTH)

2=(YES, JUST CALTRANS)

3=(YES, JUST LOCAL GOVERNMENTS)

4=No

98=(DON'T KNOW)

99=(REFUSED)

B14. And what about [*as a subcontractor: / as a subconsultant:*] is your company qualified and interested in working with Caltrans and local governments in California?

1=Yes, (BOTH)

2=(YES, JUST CALTRANS)

3=(YES, JUST LOCAL GOVERNMENTS)

4=No

98=(DON'T KNOW)

99=(REFUSED)

C1. I now want to ask you about the geographic area your company serves. You are located in the [*California geographic region*]. Is that correct?

1=Yes – SKIP TO C4

2=No

98=(DON'T KNOW)

99=(REFUSED)

C2. In what county are you located?

(REFER TO COUNTY MASTER LIST)

C3. That means you're in the [*California geographic region*]. Thinking about potential transportation projects, could your company work throughout this region or only in part of the region?

1=Throughout the region – SKIP TO C6

2=Only in parts of region – SKIP TO C5

98=(DON'T KNOW) – SKIP TO C5

99=(REFUSED) – SKIP TO C6

C4. Thinking about potential transportation projects, could your company work throughout this region or only in part of the region?

1=Throughout the region – SKIP TO C6

2=Only in parts of region

98=(DON'T KNOW)

99=(REFUSED) – SKIP TO C6

C5a-bb. What parts of the [*California geographic region*]? Could your company work in [*California geographic sub-region*] ? (READ LIST - READ COUNTIES IF NECESSARY)

1 = Yes

2 = No

3 = Maybe

98 = (DON'T KNOW)

99 = (REFUSED)

C5a=Crescent City (Del Norte County)

C5b=Eureka (Humboldt County)

C5c=Fort Bragg (Mendocino County)

C5d=Clear Lake (Lake County)

C5e=Yuba City and Chico (Yuba, Sutter, Colusa, Glenn, Butte Counties)

C5f=Truckee (Nevada and Sierra Counties)

C5g=Sacramento and its suburbs (Sacramento/Yolo Counties)

C5h=Auburn, Placerville, and South Tahoe (El Dorado/Placer Counties)

C5i=Santa Rosa (Sonoma County)

C5j=Marin County (Marin County)

C5k=Napa-Fairfield (Solano and Napa Counties)

C5l=City of San Francisco (San Francisco County)

C5m=East Bay (Alameda and Contra Costa Counties)

C5n=South Bay (Santa Clara and San Mateo Counties)

C5o=Monterey, Salinas & Santa Cruz (Monterey, and Benitas, Santa Cruz Counties)

C5p=San Luis Obispo (San Luis Obispo County)

C5q=Santa Barbara (Santa Barbara County)

C5r=Stockton (San Joaquin, Amador, Stanislaus, Calaveras, Alpine, Tuolumne)

C5s=Merced (Merced and Mariposa Counties)

C5t=Fresno (Madera, Fresno, Kings, Tulare Counties)

C5u=Bakersfield (Kern County)

C5v=San Bernardino County

C5w=Riverside County

C5x=Los Angeles, Burbank, Long Beach, and Pomona (Los Angeles County)

C5y=Simi Valley, Oxnard, and Ventura (Ventura County)

C5z=Anaheim to San Clemente (Orange County)

C5aa=San Diego to Oceanside (San Diego County)

C5bb=Imperial Valley (Imperial County)

C5xx. OTHER - SPECIFY

1=VERBATIM

C6. Would your company work outside this region as well?

1=Yes

2=No – SKIP TO D1

98=(DON'T KNOW)

99=(REFUSED)

C7. North Coast, which extends from Eureka to the Oregon border. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C8. Shasta-Redding Area, which extends from Redding to the Oregon border. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C9. Sacramento-Tahoe Region, which extends through the Sacramento Valley to Lake Tahoe (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C10. San Francisco Bay Area, which extends from San Jose to Santa Rosa. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C11. Central Coast Region, which extends from Santa Barbara to Salinas. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C12. Central Valley, which extends from Bakersfield to Stockton. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C13. Bishop Region, which extends from Bishop to Mono Lake along the Nevada border. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C14. San Bernardino-Riverside Region, which includes San Bernardino and Riverside, east to Arizona. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C15. Los Angeles Basin, which extends from San Clemente to Ventura and east to Pomona and Palm Springs. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

C16. San Diego Region, which extends from San Diego and Oceanside east to Arizona. (REPEAT AS NEEDED) Please tell me whether or not your company could be involved in transportation projects in that region.

1=Yes

2=No

98=(DON'T KNOW)

99=(REFUSED)

D1. About what year was your firm established?

(RECORD FOUR-DIGIT YEAR, I.E. '1977')

(9998 = DON'T KNOW)

(9999 = REFUSED)

1=NUMERIC (1600-2006)

D2. In rough dollar terms, what was the largest transportation-related contract or subcontract your company was awarded in California during the past five years?

(NOTE TO INTERVIEWER: INCLUDES CONTRACTS NOT YET COMPLETE)

(READ CATEGORIES IF NECESSARY)

1=$100,000 or less

2=More than $100,000 to $500,000

3=More than $500,000 to $1 million

4=More than $1 million to $2 million

5=More than $2 million to $5 million

6=More than $5 million to $10 million

7=More than $10 million to $20 million

8=More than $20 million

97=(NONE)

98=(DON'T KNOW)

99=(REFUSED)

D3. Was this the largest transportation-related contract or subcontract that your company [*bid / proposed*] on or submitted quotes for in California during the past five years?

1=Yes – SKIP TO D5

2=No

98=(DON'T KNOW) – SKIP TO D5

99=(REFUSED) – SKIP TO D5

D4. What was the largest transportation-related contract or subcontract that your company [*bid/proposed*] on or submitted quotes for in California during the past five years?

(READ CATEGORIES IF NECESSARY)

1=$100,000 or less

2=More than $100,000 to $500,000

3=More than $500,000 to $1 million

4=More than $1 million to $2 million

5=More than $2 million to $5 million

6=More than $5 million to $10 million

7=More than $10 million to $20 million

8=More than $20 million

97=(NONE)

98=(DON'T KNOW)

99=(REFUSED)

D5. [ASK ONLY IF B4=3, 5, 6, OR 7] Now thinking of all of your firm's locations, both within and outside of California, what would you estimate was the total amount your firm earned from supply work on Caltrans projects in 2005?

1=$100,000 or less

2=More than $100,000 to $500,000

3=More than $500,000 to $1 million

4=More than $1 million to $2 million

5=More than $2 million to $5 million

6=More than $5 million to $10 million

7=More than $10 million to $20 million

8=More than $20 million to $50 million

9=More than $50 million to $75 million

10=More than $75 million

97=(NONE)

98=(DON'T KNOW)

99=(REFUSED)

D6. [ASK ONLY IF B4=8]Now thinking of all of your firm's locations, both within and outside of California, what would you estimate was the total amount your firm earned from trucking work on Caltrans projects in 2005?

1=$100,000 or less
2=More than $100,000 to $500,000
3=More than $500,000 to $1 million
4=More than $1 million to $2 million
5=More than $2 million to $5 million
6=More than $5 million to $10 million
7=More than $10 million to $20 million
8=More than $20 million to $50 million
9=More than $50 million to $75 million
10=More than $75 million
97=(NONE)
98=(DON'T KNOW)
99=(REFUSED)

E1. My next questions are about the ownership of the business. A business is defined as woman-owned if more than half - that is, 51 percent or more - of the ownership and control is by women. By this definition, is [*firm name* / *new firm name*] a woman-owned business?

1=Yes
2=No
98=(DON'T KNOW)
99=(REFUSED)

E2. A business is defined as minority-owned if more than half - that is, 51 percent or more - of the ownership and control is African American, Asian, Hispanic, Native American or another minority group. By this definition, is [*firm name* / *new firm name*] a minority-owned business?

1=Yes
2=No – SKIP TO E4
3=(OTHER GROUP - SPECIFY)
98=(DON'T KNOW)
99=(REFUSED)

E2. OTHER GROUP - SPECIFY

1=VERBATIM

E3. Would you say that the minority group ownership is mostly African American, Asian-Pacific American, Subcontinent Asian American, Hispanic American, or Native American?

1=African-American

2=Asian Pacific American (persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia(Kampuchea),Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Common-wealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kirbati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong)

3=Hispanic American (persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race)

4=Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians)

5=Subcontinent Asian American (persons whose Origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka)

6=(OTHER - SPECIFY)

98=(DON'T KNOW)

99=(REFUSED)

E3. OTHER - SPECIFY

1=VERBATIM

E4. Is your firm certified as a small business enterprise by the State of California or other agency?

1=Yes

2=No

3=(OTHER - SPECIFY)

98=(DON'T KNOW)

99=(REFUSED)

E4. OTHER - SPECIFY

1=VERBATIM

E5. Is your firm certified as a Disadvantaged Business Enterprise (DBE)?

1=Yes

2=No

3=(OTHER - SPECIFY)

98=(DON'T KNOW)

99=(REFUSED)

E5. OTHER - SPECIFY

1=VERBATIM

F1. Dun & Bradstreet indicates that your company has about [*number*] employees working out of just your location. Is that a fairly accurate average thinking about all of 2005?

(INCLUDES EMPLOYEES WHO WORK AT THAT LOCATION AND THOSE WHO WORK FROM THAT LOCATION)

1=Yes – SKIP TO F3

2=No

98=(DON'T KNOW)

99=(REFUSED) – SKIP TO F3

F2. About how many employees did you have working out of just your location, on average, over the course of last year?

(RECORD NUMBER OF EMPLOYEES)

1=NUMERIC (1-999999999)

F3. Dun & Bradstreet lists the annual gross revenue of your company, just considering your location, to be [*dollar amount*]. Is that accurate for 2005?

1=Yes – SKIP TO F5

2=No

98=(DON'T KNOW)

99=(REFUSED) – SKIP TO F5

F4. Roughly, what was the gross revenue of your company, just considering your location, in 2005? Would you say . . . (READ LIST)

1=Less than $200,000
2=$200,000 - $499,999
3=$500,000 - $999,999
4=$1 Million - $2.49 Million
5=$2.5 Million - $4.9 Million
6=$5 Million - $9.9 Million
7=$10 Million - $24.9 Million
8=$25 Million - $49.9 Million
9=$50 Million or more
98=(DON'T KNOW)
99=(REFUSED)

F5. For 2005, about how many employees did you have, on average, for all of your California locations?

1=(ENTER RESPONSE)
98=(DON'T KNOW)
99=(REFUSED)

F5. RECORD NUMBER OF EMPLOYEES

1=VERBATIM

F6. Roughly, what was the gross revenue of your company, for all of your California locations in 2005? Would you say. (READ LIST)

1=Less than $200,000
2=$200,000 - $499,999
3=$500,000 - $999,999
4=$1 Million - $2.49 Million
5=$2.5 Million - $4.9 Million
6=$5 Million - $9.9 Million
7=$10 Million - $24.9 Million
8=$25 Million - $49.9 Million
9=$50 Million or more
98=(DON'T KNOW)
99=(REFUSED)

G1. Finally, we're giving business owners and managers an opportunity to offer general insights on your industry, including how difficult it is to start or expand your business and to [*bid* / *propose*] on and win work. As you're thinking, be sure to consider any issues related to Caltrans and local government projects in California. What thoughts do you have to offer on these topics?

1=VERBATIM (PROBE FOR COMPLETE THOUGHTS)

G2. Caltrans is looking for ways to improve its contracting practices and those of its prime [*contractors* / *consultants*] to ensure that they are open and fair. Do you have any thoughts or suggestions?

1=VERBATIM (PROBE FOR COMPLETE THOUGHTS)

G3. Would you be willing to participate in a follow-up interview about any of these issues?

1=Yes

2=No

98=(DON'T KNOW)

99=(REFUSED)

H1. Just a few last questions. What is your name and position at [*firm name* / *new firm name*]?

(RECORD FULL NAME)

1=VERBATIM

H2. What is your position?

1=Receptionist

2=Owner

3=Manager

4=CFO

5=CEO

6=Assistant to Owner/CEO

7=Sales manager

8=Office manager

9=(OTHER - SPECIFY)

99=(REFUSED)

H2. OTHER - SPECIFY

1=VERBATIM

H3. For purposes of a receiving any Caltrans materials, is your mailing address [*firm address*]:

1=Yes

2=No

98=(DON'T KNOW)

99=(REFUSED)

H4. What mailing address should Caltrans use to get any materials to you?

1=VERBATIM

H5. What fax number should Caltrans use to get any materials to you?

1=ENTER FAX

97=(NO FAX NUMBER)

98=(DON'T KNOW)

99=(REFUSED)

H5. ENTER FAX NUMBER

1=NUMERIC (1000000000-9999999999)

H6. What e-mail address should Caltrans use to get any materials to you?

1=ENTER E-MAIL

97=(NO EMAIL ADDRESS)

98=(DON'T KNOW)

99=(REFUSED)

H6. (RECORD EMAIL ADDRESS) (VERIFY ADDRESS LETTER BY LETTER: EXAMPLE: 'John@CRI-RESEARCH.COM' SHOULD BE VERIFIED AS: J-O-H-N-at-C-R-I-hyphen-R-E-S-E-A-R-C-H-dot-com)

1=VERBATIM

APPENDIX D.
Procedures for Estimating MBE/WBE Availability

This appendix discusses BBC's approach to developing dollar-weighted estimates of relative MBE/WBE availability.

Procedures for Determining MBE/WBE Availability

"Firms," not "business establishments," are the unit of analysis for the availability calculations. BBC applied two types of screening of firms to be counted in the MBE/WBE availability analysis: Fundamental criteria that a firm must meet to be considered in the analysis (regardless of the contract), and criteria that a firm must meet to be considered for a particular contract.

Screening of firms to be considered in the availability analysis for any contract. A firm must meet the following criteria to be counted in the MBE/WBE availability analysis for any contract element.

- Be a for-profit business, not a public agency or not-for-profit organization;
- Have a location in California;
- Be identified by Dun & Bradstreet (D&B) as operating in mid-2006 within a main line of business related to transportation construction and engineering work;
- Have a working phone number and someone who will answer the phone or return a phone call;
- Have an owner or manager who is willing to take part in the availability survey and be able to complete the survey in English;
- Confirm that the firm does perform work related to transportation construction, maintenance or design;
- Confirm that the firm has a main line of business within one of the areas of focus of the availability analysis;
- Have performed or bid on past Caltrans, local government or private sector transportation construction or engineering contracts in the past five years;
- Have been in business during the year in which the contract began; and
- Have answered the survey questions that asked whether the firm was minority- or women-owned and controlled (any firm not answering this question was excluded from the availability analysis).

The study team considered one additional measure to screen firms before considering them available for specific Caltrans contracts or for local agency contracts. Interviewers asked, "Now, thinking about future transportation work, is your company qualified and interested in working with Caltrans and local governments in California?" The only firms considered in the MBE/WBE availability analysis

for Caltrans contracts were firms responding "yes" to both or "yes" to just Caltrans work. The only firms considered as available for local agency work were firms responding "yes" to both or "yes" to just local agency work.

Additional screening to be considered for a specific Caltrans or local agency contract or subcontract. MBE/WBE availability for a particular set of contracts is determined contract-by-contract for each element of each contract (the prime portion, subcontract portions, trucking and supply portions, etc.) and then dollar-weighted to determine overall availability.

Firms are counted as available for some prime contracts or subcontracts and not for others depending upon the characteristics of the contract element and the characteristics of the firm, as described below.

For each contract element, the study team's analysis identifies:

- Agency (Caltrans or local agency);
- Location (one of 12 regions based on Caltrans district, or North Region or Central Region for certain engineering contracts);
- Contract role (prime contractor and subcontractor, including supplier and trucker);
- Size of the contract role for subcontractor elements and size of the entire contract for prime contractor elements;
- Date that contract began; and
- Work specialty.

Agency. A firm must respond that it is qualified and interested in Caltrans work or local agency work to meet the Agency criterion (discussed above).

Location. Firm owners and managers were asked whether or not their firm could be involved in transportation projects within 12 regions of California that correspond to the Caltrans districts. A firm meets the location criterion if it reports that it could be involved in any county within the region in which the work was located. (BBC applied this assumption as 80 percent of the firms surveyed that were counted as available for transportation construction or engineering work reported that they can work in every county of their home region).

Caltrans information for engineering contracts in the North and Central Regions do not identify the district in which the work was conducted. Therefore, any firm available for work anywhere within these regions are assumed to work in any district within the region.

Contract role. To meet the "prime contractor" contract role criterion, the firm must have been awarded or bid on past transportation work as a prime contractor. This can be on Caltrans, local agency or private sector contracts. A firm must have been awarded or submitted bids or quotes as a subcontractor to meet the "subcontractor" test. Similar tests apply for "trucking" and for "supplier."

Size of 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 for the 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. To be counted as available for a contract element (both prime contract or 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 before the study period and therefore were included in the count of available firms because of firm age.

Work specialty. Each work element in a contract is assigned a "work specialty code." This code is based on the main line of work of the firm that actually performed that work element. To be counted as available within a "work specialty," a firm must have the same work specialty code. The code for each firm is based on the description of the main line of business confirmed or identified by the firm owner or manager (the D&B SIC code for the firm or the line of work identified by the firm in Availability Survey). In some cases, the work specialty code of a contract element was outside the core areas that were studied in the Availability Survey. These specialty areas were coded as other construction, other construction supply, other construction equipment and other professional services. Firms in these "other" specialty areas that were surveyed in the availability analysis are used as a proxy for these "other" firms when determining relative MBE/WBE availability for these contract elements.

In some cases, the work specialty code could not be identified beyond general construction or engineering work. Availability for those work elements was based on all firms that do prime or subcontracting work (for construction versus engineering contracts). The firms counted as available for that contract element were also subject to other screening (location, etc.).

Dollar-Weighting Across Contracts

The process described above relates to determining relative MBE/WBE availability for a specific contract element. To develop an availability figure pertaining to many different contracts, BBC weighted the MBE/WBE availability for a contract element by the dollars awarded or paid for that contract element. Availability determined for large prime contracts and subcontracts received greater weight than availability determined for smaller prime contracts and subcontracts when determining overall availability for a set of contract elements.

For illustration, if BBC were determining overall MBE/WBE availability for $1 million in subcontracts comprised of one $500,000 subcontract, one $300,000 subcontract and one $200,000 subcontract, the availability for the $500,000 subcontract would receive a weight of 0.5, the $300,000 subcontract would receive a weight of 0.3 and the $200,000 subcontract would receive a weight of 0.2. If MBE/WBE availability for the $500,000 subcontract was 10 percent, the MBE/WBE availability for the $300,000 subcontract was 20 percent and the MBE/WBE availability for the $200,000 subcontract was also 20 percent, then overall MBE/WBE availability for this set of subcontracts would be 15 percent (0.5 times 10 percent plus 0.3 times 20 percent plus 0.2 times 20 percent).

The Availability and Disparity Study examines transportation construction and engineering contracts awarded by Caltrans directly and by local governments receiving federal or state funds through Caltrans. These contracts involve both prime contractors and subcontractors ("prime consultants" and "subconsultants" for transportation engineering contracts). The balance of this appendix reviews the data Caltrans currently collects and maintains for these contracts and the additional data collection the study team undertook to complete the MBE/WBE availability analysis.

Collection of Contract Information

The study team collected contract information for Caltrans construction and engineering contracts; Local Assistant contracts (both design and construction phases); and the State Route 125 project.

Construction contracts. BBC collected Caltrans construction contract information for the period of January 1, 2002 through December 31, 2006 or late-2006 from the following sources:

- Bid summary database;
- Request to Sublet forms (Form 1201);
- Substitution of subcontractor information (also on Form 1201); and
- Final report of utilization (Form 2402F).

After extensive review of these data sources, the study team determined that the Request to Sublet (1201) forms provided the most reliable and comprehensive information.

The Request to Sublet form lists the prime contractor and all the subcontractors they plan to use that will receive payments in excess of one-half of one percent of the total contract amount. The prime contractor also lists dollar amount estimates for each subcontractor. Caltrans uses this form to make sure that primes perform at least 50 percent of the work, a requirement in state law. (Certain specialty subcontracting is not counted against the subcontracting limit but still reported on this form.) Because all subcontractors need to be listed regardless of DBE status, this form is suitable for identifying the size of each subcontract at time of award.

Caltrans does not maintain a database for Request to Sublet information. Although some information is present at Caltrans Headquarters, the requests to sublet generally are kept in hard copy form in the contract files for each construction contract. These files are typically found in each Caltrans district. Certain districts that serve as regional headquarters sometimes consolidate information from other districts in their region.

The BBC study team went to Caltrans district offices to attempt to locate 1201 Forms for each Caltrans construction contract from January 1, 2002 through December 31, 2006. Once the form for a contract was located, the study team made photocopies of the forms. The study team used the Bid Summary database on Caltrans construction contracts as a master list of contracts to aid in locating the appropriate construction contract file and 1201 Form. When a construction contract file was not immediately available from district files, Caltrans staff assisted in locating the files. Once a construction file was located, nearly every file contained a 1201 Form. Following the collection of forms from all districts, the study team entered information directly from these forms into an electronic database that recorded contract number, funding source, and location of work, as well as each prime and subcontracting firm's name, address, DBE status, and contract-specific payment amounts.

According to state law, any prime contractor wishing to substitute a subcontractor or make substantial changes to the work to be performed by a subcontractor must obtain approval from Caltrans prior to making this change. (Prior to May 1, 2006, Caltrans' DBE program had similar requirements when substituting a DBE.) The prime contractor must submit a separate 1201 Form for the substituting subcontracting firm in order to comply with this requirement. The study team collected 1201 Forms pertaining to substitution of subcontractors at the same time and in the same fashion as described above.

Transportation engineering contract data collection. The study team sought information on prime consultants and subconsultants performing engineering-related services for Caltrans from 2002 through 2006. The Caltrans Division of Procurement and Contracts (DPAC) maintains data on prime consultants receiving Caltrans contracts through this time period, but does not have complete information on subconsultants. Therefore, the DPAC data could only serve as a master list of engineering-related contracts for the study period.

Caltrans does not document information for DBE and non-DBE engineering subconsultants within any single form comparable to the 1201 Form that is completed for construction contracts. Individual districts do maintain information on prime consultants and subconsultants through consultant invoices sent to the district contract administrator. Because the source data come from invoices, the information pertains to prime consultants and both DBE and non-DBE subconsultants. Some districts enter this information into electronic databases. Because of the magnitude of this data collection effort, the study team collected district databases where available and developed a sampling strategy for districts that did not maintain electronic data.

Sampling methodology. The North Region (Districts 1, 2 and 3), District 4, District 11 and District 12 did not maintain or were unable to provide electronic files to document firm-specific payments for engineering contracts within the study period.

The study team sampled engineering contracts in these districts. For each district, the study team defined the sample frame to be all design consultant contracts listed in the DPAC database that were executed on or after January 1, 2002 and that were related to engineering contracts (including environmental consulting, landscape design, traffic studies, etc.).

After defining the sample frame, the study team selected the following engineering-related contracts for data collection:

- All contracts that did not receive federal funds;
- All federally-funded contracts executed after the May 1, 2006 transition to an all race-neutral DBE program;
- One out of every three remaining federally-funded contracts, selected sequentially based on contract number.

This generated a sample of 42 out of 88 total engineering contracts in the North Region and in Districts 4, 11, and 12. The study team worked with staff in each district to locate the contract information. The team successfully captured contract information for 34 of the 42 sampled contracts.

Data collection. Within those six districts that did not have or had not made available electronic files to track firm-specific payments for contracts during the study period, the study team collected prime and subconsultant payment information from task order invoices for each sampled contract. The study team conducted this data collection at district offices during fall 2006. This data collection project involved the entry of information about firms and payment amounts from every task order invoice submitted under a selected contract into a spreadsheet similar to the database developed by Central Region consultant services contract management staff.

District databases. Several districts (Central Region, District 7, District 8) possess spreadsheets or databases that track the firm-specific payment information contained on the task order invoices. The methods and the format of these spreadsheets vary slightly across these districts, but BBC determined that the data of interest to the utilization analysis were available for nearly all contracts from these districts. Data collection for those six districts with reliable and nearly exhaustive records of firm-specific spending also included follow-up requests from the study for similar electronic files for the remaining contracts for 2006.

Identification of location. Due to the centralized administration of consultant service contracts in the North and Central Regions for districts within those regions, it was not possible to determine the exact districts in which the region's contracted work was completed. As a result, the study team was unable to report district-specific engineering utilization for Districts 1, 2, 3, 5, 6, 9, or 10. Instead, the study team examined and reported utilization at the regional level.

Local Assistance contract data collection. Certain federal funds help reimburse costs of construction and engineering contracts directly awarded by Caltrans. Other federal funds administered by Caltrans go to local government transportation projects. Cities, counties and other local agencies award construction and engineering work to be reimbursed by Caltrans using federal and state monies. Where federal funds are used, the Federal DBE Program requires subrecipients to comply with the state department of transportation program approved by USDOT.

Caltrans does not currently maintain comprehensive information on the types of construction and engineering work involved in the federally-assisted contracts awarded by local agencies. In addition, firms available for these contracts may not be known to Caltrans, as local agencies perform the contracting functions.

Sampling methodology. Using an electronic database of Caltrans grants to local agencies for transportation design and construction work from 2002 to the present, the study team, working with staff in the Caltrans Division of Local Assistance, defined a sample of local agency projects for data collection. This database listed an agency and project identifier, the project-specific phases supported through the grant (design, construction, or right of way), and the source of the funds (federal or state) for all grants. For some of the grants, this database also listed the dollar amount, project date, date of award, and a location and work type description for a subset of the grants.

Using this information, the BBC study team excluded grants to projects with start dates prior to the study period and those that did not specify financial support for a construction or design phase. The study team retained grants to projects without project dates in the sample to avoid excluding valid cases. Next, the study team split the projects into two sample frames determined by funding source (state or federal) and sorted these two lists by the total amount of the project-specific grants. The study team eliminated projects with negative grant amounts on the advice of Local Assistance staff that these negative amounts likely reflected transfers of funds from previous grants back to the division.

Having defined separate sample frames for federally-assisted and state-administered project grants, the study team assigned each project grant to one of eight strata and sampled projects from within these groups. Federally-assisted grants to projects with dates after May 1, 2006 were assigned to a separate stratum. The remaining federally-assisted grants, including those to projects without a recorded project start date, were split into four strata based on the dollar amount of the grant: less than $1 million, $1 million to $2 million, $2 million to $5 million, and more than $5 million. State-administered grants to local agencies comprise the remaining three strata, again assigned according to dollar amount of the grant: less than $1 million, $1 million to $2 million, and more than $2 million.

In order to maximize the sample's total share of Caltrans federal and state grant dollars going to local agencies, the BBC study team sampled a large proportion of those projects in the larger grant strata and smaller shares of those projects in the smaller grant strata. Figure D-1 enumerates the number of project phases in each strata and the number of these that were included in the sample.

Figure D-1.
Sampling and sample weights for local assistance projects

	State-funded contracts	Federally-assisted contracts	
	2002-2006	Before May 1, 2006	After May 1, 2006
More than $5 million	Sampled every project: 171 Received completed information for: 78 Sample weight: 2.19	Sampled all projects: 153 Received completed information for: 107 Sample weight: 1.43	Sampled every project: 36 Received completed information for: 25 Sample weight: 1.44
$2 to $5 million		Sampled: 44 of 195 Received completed information for: 32 Sample weight: 6.09	
$1 to $2 million	Sampled: 74 of 110 Received completed information for: 34 Sample weight: 3.23	Sampled: 41 of 303 Received completed information for: 27 Sample weight: 11.22	
Less than $1 million	Sampled: 112 of 1,439 Received completed information for: 66 Sample weight: 21.8	Sampled: 62 of 2,479 Received completed information for: 44 Sample weight: 56.34	

Source: BBC Research and Consulting.

Data collection. Having defined the sample of grants and project phases for data collection, the BBC study team and Caltrans Local Assistance staff developed a letter of introduction and an individualized data request form for submission to every agency included in the sample.

With follow-up and assistance from District Local Assistance Engineers, the BBC study team received valid information for 413 of the 693 project phases included in the original sample. The number of complete responses from each stratum is reported in Figure D-1. Because of the sampling design (obtaining a relatively large sample of the largest Local Assistance contracts), the information received from local agencies represented an estimated 42 percent of the total dollars of Local Assistance projects during this time frame.

The compiled information indicated if the local agency contracted out construction and design services, and if so, the anticipated or actual payment amounts to all prime contractors and subcontractors involved in these project phases. The study team manually entered this information from the request forms into a separate Local Assistance database.

Sample weights. BBC applied the sample weights in Figure D-1 according to the strata from which the Local Assistance contract was sampled. For example, utilization information for a federally-funded contract awarded after May 1, 2006 received a weight of 1.44 while utilization information for a $3 million federally-funded contract prior to May 2006 received a weight of 6.09. (These weights only applied to Local Assistance contracts.)

State Route 125 project data collection. The State Route 125 South (SR 125) project in southern San Diego County is an 11-mile corridor of new four-lane controlled-access highway/toll road between State Route 905 (SR 905) and State Route 54 (SR 54). The total budget for all phases of the project is $644 million, which is funded through various private and public resources.

The project is being designed and constructed under a franchise agreement between Caltrans and South Bay Expressway (SBX), formerly California Transportation Ventures (CTV). The latter entity is a private consortium selected by Caltrans in 1990 to develop the project with Caltrans providing oversight. Otay River Constructors (ORC) is the prime contractor design-builder.

During the study period, ORC began the two primary construction sub-projects of the SR 125 project. The "Gap Connector" sub-project includes the northern 1.5 miles of the toll road and the freeway-to-freeway interchange at SR 54 and is publicly funded with a combination of federal monies and local sales tax funds. The remaining 9 miles of construction comprise the "Toll Road" sub-project and are funded by a mix of private financing and a direct federal loan through the U.S. Department of Transportation's TIFIA program in TEA-21. Staff at SBX informed BBC that contracts for these sub-projects were completed during the spring of 2003.

Given the use of federal dollars in support of this project, the Federal DBE Program was in place for these sub-projects. Caltrans District 11 staff monitor and report compliance of the DBE Program on the "Gap Connector" and the "Toll Road" sub-projects.

Caltrans District 11 staff issued data requests on behalf of BBC and received several items in response from ORC and SBX. ORC submitted a hard-copy spreadsheet that detailed payment information for both the "Gap Connector" and "Toll Road" construction elements. This spreadsheet listed each subcontracting firm that had received work and sub-project-specific dollar amounts paid or anticipated. SBX provided electronic copies of the invoice payment requests from Otay River Constructors, which indicated sub-project-specific amounts paid through December 2006.

The study team entered firm names, addresses, and sub-project-specific payment amounts from these hard-copy spreadsheets and invoices into a separate SR 125 database. The study team calculated firm-specific payment amounts for the entire SR 125 project and analyzed these as payments under one large contract.

Figure E-2.
Agency: Caltrans
Funding: Federal
Type: Construction and Engineering
Time Period: 2002-April 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	5,346	$4,014,306	$4,115,694				
(2) MBE/WBE	2,261		$637,627	15.5	16.9	-1.4	91.5
(3) WBE	606	$224,484	$237,521	5.8			127.9
(4) MBE	1,658	$604,640	$400,366	9.7	12.4	-2.7	78.3
(5) African American-owned	95		$37,913	4.5	2.4	1.3 -1.5	38.3
(6) Total Asian American-owned	333	$380,416 $48,600	$64,710	1.6	2.0	-0.4	77.8
(7) Asian-Pacific American-owned	176	$35,580	$23,590	0.9	1.5	-1.0	37.6
(8) Subcontinent Asian American-owned	151	$29,341	$40,998	1.0	0.5	0.5	201.2
(9) Hispanic American-owned	693	$19,182 $261,021	$276,794	0.6 6.7	7.3	-0.6	92.3
(10) Native American-owned	193		$20,949		0.7	-0.2	72.7
(11) Unknown MBE	344	$15,089					
(12) DBE-certified	1,846	$20,127 $393,251	$414,980	0.5 10.1			
(13) Women-owned DBE	387		$54,026				
(14) Minority-owned DBE	1,440	$336,005	$361,021	8.8			
(14) African American-owned DBE	90	$50,333 $31,716	$34,567	1.3 0.8			
(16) Total Asian American-owned DBE	274	$41,715	$57,998	1.4			
(17) Asian-Pacific American-owned DBE	157	$17,414	$21,542	0.5			
(18) Subcontinent Asian American-owned DBE	114	$24,278	$36,394	0.9			
(19) Hispanic American-owned DBE	557	$228,390	$247,261	6.0			
(20) Native American-owned DBE	187	$19,736	$20,930	0.5			
(21) White male-owned DBE	1	$65	$193	0.0			
(22) Unknown DBE-MBE	329	$14,189					
(23) Unknown DBE	21	$7,107					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-3.
Agency: Caltrans
Funding: Federal
Type: Construction and Engineering
Time Period: May-Dec 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	68	$73,672	$77,788				
(2) MBE/WBE	24		$4,790	6.2	13.0	-6.8	47.4
(3) WBE	5		$1,337	1.7	3.9	-2.2	43.6
(4) MBE	20	$3,420	$3,462	4.5	9.1	-4.6	49.1
(5) African American-owned	1	$1,337 $683	$727	0.9	2.0	-1.1	45.9
(6) Total Asian American-owned	6	$2,092 $259	$276	0.4	1.4	-1.1	24.8
(7) Asian-Pacific American-owned	1	$5	$6	0.0	1.1	-1.1	0.7
(8) Subcontinent Asian American-owned	5	$254	$270	0.3	0.3	0.1	122.4
(9) Hispanic American-owned	4	$937	$2,455	3.2	4.8	-1.7	65.4
(10) Native American-owned	2	$5	$5	0.0	0.7	-0.7	0.8
(11) Unknown MBE	7	$208					
(12) DBE-certified	22	$2,195	$3,565	4.6			
(13) Women-owned DBE	3	$103	$104	0.1			
(14) Minority-owned DBE	19	$2,070	$3,469	4.5			
(14) African American-owned DBE	1	$683	$734	0.9			
(16) Total Asian American-owned DBE	4	$228	$245	0.3			
(17) Asian-Pacific American-owned DBE	1	$5	$6	0.0			
(18) Subcontinent Asian American-owned DBE	3	$223	$239	0.3			
(19) Hispanic American-owned DBE	4	$937	$2,477	3.2			
(20) Native American-owned DBE	2	$5	$5	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	7	$208					
(23) Unknown DBE	1	$30					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.
Source: BBC Research and Consulting Disparity Analysis.

Figure E-4.
Agency: Caltrans
Funding: Federal
Type: Construction
Time Period: 2002-Apr 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	4,915	$3,883,036	$3,883,036				
(2) MBE/WBE	2,061		$563,145	14.5	16.3	-1.8	89.0
(3) WBE	544	$212,252	$212,252	5.5			125.7
(4) MBE	1,520	$563,145	$351,154	9.0	12.0	-2.9	75.6
(5) African American-owned	82		$35,512	4.3	2.3	1.1 -1.4	39.0
(6) Total Asian American-owned	265	$351,154 $32,264	$33,694	0.9	1.7	-0.8	52.5
(7) Asian-Pacific American-owned	132	$34,005	$14,292		1.3	-0.9	29.2
(8) Subcontinent Asian American-owned	131	$18,538	$19,360	0.5	0.4	0.1	126.9
(9) Hispanic American-owned	645	$13,686 $249,927	$261,003	0.4 6.7	7.3	-0.6	92.4
(10) Native American-owned	192		$20,945		0.7	-0.1	79.9
(11) Unknown MBE	336	$14,901					
(12) DBE-certified	1,689	$20,056 $363,752	$363,752	0.5 9.4			
(13) Women-owned DBE	341		$46,276				
(14) Minority-owned DBE	1,332	$311,558	$317,736	8.2			
(14) African American-owned DBE	77	$45,376 $30,141	$32,194	1.2 0.8			
(16) Total Asian American-owned DBE	222	$27,469	$29,340	0.8			
(17) Asian-Pacific American-owned DBE	125	$13,347	$14,256	0.4			
(18) Subcontinent Asian American-owned DBE	97	$14,121	$15,083	0.4			
(19) Hispanic American-owned DBE	518	$219,882	$234,857	6.0			
(20) Native American-owned DBE	187	$19,736	$21,080	0.5			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	325	$14,071					
(23) Unknown DBE	19	$7,077					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-5.
Agency: Caltrans
Funding: Federal
Type: Construction
Time Period: May-Dec 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	62	$71,375	$71,375				
(2) MBE/WBE	21		$2,496	3.5	10.9	-7.4	32.2
(3) WBE	5		$1,337	1.9	3.3	-1.4	57.1
(4) MBE	17	$2,496	$1,168	1.6	7.6	-6.0	21.6
(5) African American-owned	1	$1,337 $683	$831	1.2	1.8	-0.7	63.8
(6) Total Asian American-owned	4	$1,168 $20	$24	0.0	0.6	-0.5	5.9
(7) Asian-Pacific American-owned	1	$5	$7	0.0	0.5	-0.5	1.9
(8) Subcontinent Asian American-owned	3	$14	$18	0.0	0.1	-0.1	31.7
(9) Hispanic American-owned	3	$252	$307	0.4	4.4	-4.0	9.8
(10) Native American-owned	2	$5	$6	0.0	0.8	-0.7	1.0
(11) Unknown MBE	7	$208					
(12) DBE-certified	20	$1,293	$1,293	1.8			
(13) Women-owned DBE	3	$103	$106	0.1			
(14) Minority-owned DBE	17	$1,168	$1,196	1.7			
(14) African American-owned DBE	1	$683	$852	1.2			
(16) Total Asian American-owned DBE	3	$11	$14	0.0			
(17) Asian-Pacific American-owned DBE	1	$5	$7	0.0			
(18) Subcontinent Asian American-owned DBE	2	$6	$7	0.0			
(19) Hispanic American-owned DBE	3	$252	$315	0.4			
(20) Native American-owned DBE	2	$5	$6	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	7	$208					
(23) Unknown DBE	1	$30					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-6.
Agency: Caltrans
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	437	$133,567	$239,072				
(2) MBE/WBE	203		$76,776	32.1	27.4	4.7	117.0
(3) WBE	62	$12,232	$25,269	10.6			144.5
(4) MBE	141	$42,419	$51,507	21.5	20.1	1.4	107.0
(5) African American-owned	13	$1,575	$2,476	1.0	3.4	-2.3	30.9
(6) Total Asian American-owned	70	$30,187 $16,575	$30,473	12.7	8.1	4.6	156.8
(7) Asian-Pacific American-owned	44	$5,496	$9,080	3.8	5.9	-2.1	63.9
(8) Subcontinent Asian American-owned	22	$11,042	$21,315	8.9	2.2	6.7	408.4
(9) Hispanic American-owned	49		$18,469		7.5	0.2	102.4
(10) Native American-owned	1	$71	$90	0.0	1.1	-1.1	3.4
(11) Unknown MBE	8	$11,779 $187		7.7			
(12) DBE-certified	159	$30,401	$53,500	22.4			
(13) Women-owned DBE	46	$4,957	$7,729	3.2			
(14) Minority-owned DBE	110	$25,349	$45,581	19.1			
(14) African American-owned DBE	13	$1,575	$2,474	1.0			
(16) Total Asian American-owned DBE	53	$14,463	$27,657	11.6			
(17) Asian-Pacific American-owned DBE	32	$4,066	$7,021	2.9			
(18) Subcontinent Asian American-owned DBE	18	$10,374	$20,576	8.6			
(19) Hispanic American-owned DBE	40	$9,193	$15,451	6.5			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	1	$65	$190	0.1			
(22) Unknown DBE-MBE	4	$118					
(23) Unknown DBE	2	$30					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-7.
Agency: Caltrans
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	711	$2,798,091	$2,798,091				
(2) MBE/WBE	71		$138,670	5.0	9.5	-4.5	52.2
(3) WBE	15	$138,670	$75,609		2.4	0.3	111.7
(4) MBE	56		$63,061		7.1	-4.8	31.9
(5) African American-owned	2	$75,609	$19,589	2.7	2.5	-1.8	27.7
(6) Total Asian American-owned	7	$63,061 $4,824	$4,824	2.3 0.2	1.1	-0.9	16.0
(7) Asian-Pacific American-owned	3	$19,589 $3,380	$3,380	0.7 0.1	0.8	-0.7	15.6
(8) Subcontinent Asian American-owned	4	$1,443	$1,443	0.1	0.3	-0.3	16.9
(9) Hispanic American-owned	42		$36,350		3.0	-1.7	43.1
(10) Native American-owned	5	$2,298	$2,298	0.1	0.5	-0.4	18.2
(11) Unknown MBE	0	$36,350 $0		1.3			
(12) DBE-certified	44		$56,577				
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	42	$56,577	$56,577	2.0			
(14) African American-owned DBE	1	$19,331	$20,405	0.7			
(16) Total Asian American-owned DBE	6	$53,599 $3,878	$4,094	2.0 0.1			
(17) Asian-Pacific American-owned DBE	3	$3,380	$3,568	0.1			
(18) Subcontinent Asian American-owned DBE	3	$498	$525	0.0			
(19) Hispanic American-owned DBE	30	$28,092	$29,653	1.1			
(20) Native American-owned DBE	5	$2,298	$2,425	0.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	2	$2,978					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-8.
Agency: Caltrans
Funding: Federal
Type: Construction
Time Period: 2002-Apr 2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	4,215	$1,146,446	$1,146,446				
(2) MBE/WBE	1,991		$424,819	37.1	32.1	4.9	115.3
(3) WBE	530	$136,986	$136,986	11.9			135.3
(4) MBE	1,464	$424,819	$288,093	25.1	23.3	1.8	107.8
(5) African American-owned	80		$15,202	8.8	1.9	3.1 -0.6	70.3
(6) Total Asian American-owned	258	$288,093 $27,441	$28,937	2.5	3.0	-0.4	85.1
(7) Asian-Pacific American-owned	129	$14,416	$10,868	1.3	2.4	-1.4	39.8
(8) Subcontinent Asian American-owned	127	$17,095	$18,027	1.6	0.6	1.0	268.4
(9) Hispanic American-owned	603	$10,306 $213,576	$225,226	0.9 19.6	17.2	2.4	114.0
(10) Native American-owned	187		$18,727		1.2	0.4	136.3
(11) Unknown MBE	336	$14,901					
(12) DBE-certified	1,645	$17,758 $307,175	$307,175	1.6 26.8			
(13) Women-owned DBE	341		$45,990				
(14) Minority-owned DBE	1,290	$257,959	$261,445	22.8			
(14) African American-owned DBE	76	$45,376 $10,809	$11,588	4.0 1.0			
(16) Total Asian American-owned DBE	216	$23,591	$25,291	2.2			
(17) Asian-Pacific American-owned DBE	122	$9,967	$10,685	0.9			
(18) Subcontinent Asian American-owned DBE	94	$13,624	$14,605	1.3			
(19) Hispanic American-owned DBE	488	$191,790	$205,608	17.9			
(20) Native American-owned DBE	182	$17,438	$18,695	1.6			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	325	$14,071					
(23) Unknown DBE	17	$4,099					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-9.
Agency: Caltrans
Funding: Federal
Type: Construction
Time Period: May-Dec 2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	51	$9,873	$9,873				
(2) MBE/WBE	20		$2,152	21.8	32.2	-10.4	67.6
(3) WBE	4		$992	10.1	12.1	-2.1	82.9
(4) MBE	17	$2,152	$1,168	11.8	20.1	-8.3	58.8
(5) African American-owned	1	$683	$831	8.4			438.7
(6) Total Asian American-owned	4	$992 $1,168 $20	$24	0.2	1.4	-1.2	17.1
(7) Asian-Pacific American-owned	1	$5	$7	0.1	1.9 1.1	6.5 -1.1	5.9
(8) Subcontinent Asian American-owned	3	$14	$18	0.2	0.3	-0.1	60.7
(9) Hispanic American-owned	3	$252	$307	3.1	13.8	-10.7	22.6
(10) Native American-owned	2	$5	$6	0.1	2.8	-2.7	2.0
(11) Unknown MBE	7	$208					
(12) DBE-certified	20	$1,293	$1,293	13.1			
(13) Women-owned DBE	3	$103	$106	1.1			
(14) Minority-owned DBE	17	$1,168	$1,196	12.1			
(14) African American-owned DBE	1	$683	$852	8.6			
(16) Total Asian American-owned DBE	3	$11	$14	0.1			
(17) Asian-Pacific American-owned DBE	1	$5	$7	0.1			
(18) Subcontinent Asian American-owned DBE	2	$6	$7	0.1			
(19) Hispanic American-owned DBE	3	$252	$315	3.2			
(20) Native American-owned DBE	2	$5	$6	0.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	7	$208					
(23) Unknown DBE	1	$30					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-10.
Agency: Caltrans
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	97	$93,058	$165,427				
(2) MBE/WBE	23		$33,319	20.1	24.2	-4.0	83.4
(3) WBE	8	$7,944	$18,069	10.9			193.4
(4) MBE	15	$16,730	$15,249	9.2	18.5	-9.3	49.8
(5) African American-owned	0	$0	$0	0.0	5.6 3.6 5.3	-3.6	0.0
(6) Total Asian American-owned	8	$8,787 $3,845	$7,996	4.8	6.3	-1.4	77.3
(7) Asian-Pacific American-owned	6	$1,752	$1,948	1.2	4.9	-3.8	23.9
(8) Subcontinent Asian American-owned	2	$2,093	$6,048	3.7	1.3	2.3	276.6
(9) Hispanic American-owned	7	$4,942	$7,253	4.4	7.6	-3.2	58.1
(10) Native American-owned	0	$0	$0	0.0	1.1	-1.1	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	13	$8,131	$14,499	8.8			
(13) Women-owned DBE	5	$2,032	$2,342	1.4			
(14) Minority-owned DBE	8	$6,098	$12,157	7.3			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	4	$2,895	$6,972	4.2			
(17) Asian-Pacific American-owned DBE	3	$824	$947	0.6			
(18) Subcontinent Asian American-owned DBE	1	$2,071	$6,025	3.6			
(19) Hispanic American-owned DBE	4	$3,203	$5,185	3.1			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-11.
Agency: Caltrans
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	340	$40,509	$73,645				
(2) MBE/WBE	180	$25,689	$43,457	59.0			169.5
(3) WBE	54		$7,200	9.8	11.1	-1.3	88.5
(4) MBE	126	$21,400	$36,257	49.2	34.8	24.2	207.2
(5) African American-owned	13	$4,288 $1,575	$2,485	3.4	2.9		118.1
(6) Total Asian American-owned	62	$12,730	$22,489	30.5	23.8	12.3 25.5 18.2	247.4
(7) Asian-Pacific American-owned	38	$3,744	$7,141	9.7		0.5	117.9
(8) Subcontinent Asian American-owned	20	$8,949	$15,271	20.7	4.1	16.6	503.6
(9) Hispanic American-owned	42	$6,837	$11,193	15.2	8.2	1.5	201.8
(10) Native American-owned	1	$71	$90	0.1	1.0	-0.9	11.8
(11) Unknown MBE	8	$187			7.5	7.7	
(12) DBE-certified	146	$22,270	$39,001	53.0			
(13) Women-owned DBE	41	$2,925	$5,387	7.3			
(14) Minority-owned DBE	102	$19,251	$33,424	45.4			
(14) African American-owned DBE	13	$1,575	$2,481	3.4			
(16) Total Asian American-owned DBE	49	$11,568	$20,689	28.1			
(17) Asian-Pacific American-owned DBE	29	$3,242	$6,084	8.3			
(18) Subcontinent Asian American-owned DBE	17	$8,303	$14,545	19.7			
(19) Hispanic American-owned DBE	36	$5,990	$10,254	13.9			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	1	$65	$190	0.3			
(22) Unknown DBE-MBE	4	$118					
(23) Unknown DBE	2	$30					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-12.
Agency: Local Agency
Funding: Federal
Type: Construction and Engineering
Time Period: 2002-Apr 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	1,204	$1,571,477	$3,803,609				
(2) MBE/WBE	482		$548,429		18.6	-4.2	77.4
(3) WBE	110	$207,405	$144,159	14.4	5.0	-1.3	75.1
(4) MBE	372		$404,270		13.6	-3.0	78.3
(5) African American-owned	11	$64,248 $3,810	$8,553	3.8 0.2	2.2	-2.0	10.0
(6) Total Asian American-owned	92	$143,157 $42,998	$105,578	10.6 2.8	3.4	-0.6	81.1
(7) Asian-Pacific American-owned	52		$75,336		2.9	-0.9	68.4
(8) Subcontinent Asian American-owned	33	$6,562	$27,486	0.7	0.5	0.2	136.5
(9) Hispanic American-owned	191	$35,199	$260,489	2.0	7.1	-0.3	96.0
(10) Native American-owned	19	$1,776	$29,650	0.8			101.3
(11) Unknown MBE	59	$88,928 $5,645		6.8			
(12) DBE-certified	315	$110,726	$323,202	8.5	0.8	0.0	
(13) Women-owned DBE	44	$7,998	$15,145	0.4			
(14) Minority-owned DBE	270	$102,716	$307,911	8.1			
(14) African American-owned DBE	9	$2,533	$6,607	0.2			
(16) Total Asian American-owned DBE	61	$32,822	$69,241	1.8			
(17) Asian-Pacific American-owned DBE	42	$30,105	$62,697	1.6			
(18) Subcontinent Asian American-owned DBE	19	$2,716	$6,544	0.2			
(19) Hispanic American-owned DBE	138	$62,351	$202,780	5.3			
(20) Native American-owned DBE	18	$1,448	$29,283	0.8			
(21) White male-owned DBE	1	$13	$146	0.0			
(22) Unknown DBE-MBE	44	$3,561					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-13.
Agency: Local Agency
Funding: Federal
Type: Construction and Engineering
Time Period: May-Dec 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	124	$40,696	$66,396				
(2) MBE/WBE	48		$14,562	21.9	18.3	3.7	120.2
(3) WBE	6		$2,377	3.6	5.7	-2.1	63.0
(4) MBE	42	$9,508	$12,185	18.4	12.6	5.8	146.0
(5) African American-owned	1	$1,651 $23	$34	0.1	1.9	-1.9	2.7
(6) Total Asian American-owned	14	$7,857 $1,260	$2,698	4.1	2.9	1.2	142.5
(7) Asian-Pacific American-owned	10	$756	$1,968	3.0			132.8
(8) Subcontinent Asian American-owned	4	$505	$730	1.1	0.6	0.5	177.3
(9) Hispanic American-owned	21	$6,532	$9,453	14.2 2.2	0.7		203.9
(10) Native American-owned	0	$0	$0	0.0	0.8	-0.8	0.0
(11) Unknown MBE	6	$41		7.0	7.3		
(12) DBE-certified	33	$1,790	$3,448	5.2			
(13) Women-owned DBE	2	$59	$85	0.1			
(14) Minority-owned DBE	31	$1,731	$3,363	5.1			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	11	$720	$1,931	2.9			
(17) Asian-Pacific American-owned DBE	9	$658	$1,840	2.8			
(18) Subcontinent Asian American-owned DBE	2	$62	$90	0.1			
(19) Hispanic American-owned DBE	16	$983	$1,433	2.2			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	4	$29					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-14.
Agency: Local Agency
Funding: Federal
Type: Construction
Time Period: 2002- Apr 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	1,090	$1,502,242	$3,483,483				
(2) MBE/WBE	439		$518,911		18.1	-3.2	82.1
(3) WBE	95	$202,087	$130,463	14.9	4.9	-1.1	76.9
(4) MBE	344		$388,448		13.3	-2.1	84.1
(5) African American-owned	11	$61,206 $3,810	$8,539	3.7 0.2	2.3	-2.0	10.7
(6) Total Asian American-owned	78	$140,881 $41,495	$97,961	11.2 2.8	3.0	-0.2	93.5
(7) Asian-Pacific American-owned	43		$70,171		2.7	-0.7	74.6
(8) Subcontinent Asian American-owned	33	$6,562	$27,443	0.8	0.3	0.5	254.7
(9) Hispanic American-owned	180	$34,709	$252,344	2.0	7.2	0.0	100.2
(10) Native American-owned	19	$1,776	$29,604	0.8			118.8
(11) Unknown MBE	56	$88,399 $5,401		7.2			
(12) DBE-certified	296	$109,741	$311,279	8.9	0.7	0.1	
(13) Women-owned DBE	38	$7,762	$13,813	0.4			
(14) Minority-owned DBE	257	$101,966	$297,320	8.5			
(14) African American-owned DBE	9	$2,533	$6,606	0.2			
(16) Total Asian American-owned DBE	53	$32,337	$64,179	1.8			
(17) Asian-Pacific American-owned DBE	34	$29,621	$57,637	1.7			
(18) Subcontinent Asian American-owned DBE	19	$2,716	$6,542	0.2			
(19) Hispanic American-owned DBE	134	$62,169	$197,260	5.7			
(20) Native American-owned DBE	18	$1,448	$29,275	0.8			
(21) White male-owned DBE	1	$13	$146	0.0			
(22) Unknown DBE-MBE	43	$3,478					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-15.
Agency: Local Agency
Funding: Federal
Type: Construction
Time Period: May-Dec 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	121	$40,552	$58,383				
(2) MBE/WBE	47		$13,666	23.4	16.2	7.2	144.7
(3) WBE	6		$2,377	4.1	5.2	-1.1	78.2
(4) MBE	41	$9,492	$11,289	19.3	11.0	8.4	176.2
(5) African American-owned	1	$1,651 $23	$34	0.1	1.7	-1.7	3.4
(6) Total Asian American-owned	13	$7,841 $1,244	$1,799	3.1	1.1	1.9	268.3
(7) Asian-Pacific American-owned	9	$740	$1,068	1.8			168.7
(8) Subcontinent Asian American-owned	4	$505	$730	1.3	0.1	1.2	1,970.2
(9) Hispanic American-owned	21	$6,532	$9,456	16.2	1.1	0.7	220.6
(10) Native American-owned	0	$0	$0	0.0	0.8	-0.8	0.0
(11) Unknown MBE	6	$41		7.3	8.9		
(12) DBE-certified	32	$1,774	$2,552	4.4			
(13) Women-owned DBE	2	$59	$85	0.1			
(14) Minority-owned DBE	30	$1,715	$2,467	4.2			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	10	$704	$1,028	1.8			
(17) Asian-Pacific American-owned DBE	8	$642	$937	1.6			
(18) Subcontinent Asian American-owned DBE	2	$62	$91	0.2			
(19) Hispanic American-owned DBE	16	$983	$1,439	2.5			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	4	$29					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-16.
Agency: Local Agency
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	117	$69,379	$328,139				
(2) MBE/WBE	44		$30,414	9.3	24.1	-14.8	38.4
(3) WBE	15		$13,696	4.2	7.0	-2.8	59.8
(4) MBE	29	$5,334	$16,718	5.1	17.1	-12.0	29.7
(5) African American-owned	0	$3,041 $0	$0	0.0	1.7	-1.7	0.0
(6) Total Asian American-owned	15	$2,292 $1,519	$8,711	2.7	8.0	-5.4	33.0
(7) Asian-Pacific American-owned	10	$506	$6,223	1.9	5.1	-3.2	37.1
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	2.9	-2.9	0.0
(9) Hispanic American-owned	11	$530	$8,006	2.4	6.0	-3.6	40.5
(10) Native American-owned	0	$0	$0	0.0	1.3	-1.3	0.0
(11) Unknown MBE	3	$244					
(12) DBE-certified	20	$1,002	$12,819	3.9			
(13) Women-owned DBE	6	$236	$1,332	0.4			
(14) Minority-owned DBE	14	$766	$11,487	3.5			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	9	$501	$6,019	1.8			
(17) Asian-Pacific American-owned DBE	9	$501	$6,019	1.8			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	4	$182	$5,468	1.7			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	1	$83					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-17.
Agency: Local Agency
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	154	$1,086,630	$2,568,212				
(2) MBE/WBE	15		$107,421		12.7	-8.5	33.0
(3) WBE	4		$40,968	1.6	3.0	-1.4	53.5
(4) MBE	11	$27,442	$66,452	4.2	9.7	-7.1	26.7
(5) African American-owned	0	$7,128 $0	$0	0.0	2.6	-2.6	0.0
(6) Total Asian American-owned	2	$20,314 $433	$15,222	2.6 0.6	2.9	-2.3	20.4
(7) Asian-Pacific American-owned	1	$183	$1,112	0.0	2.9	-2.8	1.5
(8) Subcontinent Asian American-owned	1	$250	$14,109	0.5	0.1	0.5	913.0
(9) Hispanic American-owned	8		$35,336		3.6	-2.2	38.1
(10) Native American-owned	1	$282	$15,894	0.6			105.0
(11) Unknown MBE	0	$19,598 $0		1.4			
(12) DBE-certified	9		$45,029	0.6	0.0		
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	9	$14,984	$45,029	1.8			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	1	$14,984 $183	$1,112	1.8 0.0			
(17) Asian-Pacific American-owned DBE	1	$183	$1,112	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	7	$14,519	$28,022	1.1			
(20) Native American-owned DBE	1	$282	$15,894	0.6			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-18.
Agency: Local Agency
Funding: Federal
Type: Construction
Time Period: 2002-Apr 2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	960	$448,781	$963,025				
(2) MBE/WBE	428	$181,760	$421,735	43.8	32.2	11.6	136.1
(3) WBE	92		$91,709	9.5	9.8	-0.2	97.6
(4) MBE	336	$126,144	$330,026	34.3			152.8
(5) African American-owned	11	$55,616 $3,810	$8,664	0.9	1.5	-0.6	58.5
(6) Total Asian American-owned	76	$41,062	$82,691	8.6 22.4	3.2 11.8	5.4	272.2
(7) Asian-Pacific American-owned	42		$69,975		2.2	5.1	329.3
(8) Subcontinent Asian American-owned	32	$6,311	$12,365	1.3	0.9	0.3	135.5
(9) Hispanic American-owned	175	$34,527 $74,377	$226,071	7.3 23.5	16.6	6.8	141.0
(10) Native American-owned	18	$1,494	$12,600	1.3			126.0
(11) Unknown MBE	56	$5,401					
(12) DBE-certified	289	$95,254	$266,967	27.7 1.0	0.3		
(13) Women-owned DBE	38	$7,762	$13,813	1.4			
(14) Minority-owned DBE	250	$87,479	$253,008	26.3			
(14) African American-owned DBE	9	$2,533	$6,709	0.7			
(16) Total Asian American-owned DBE	52	$32,154	$63,953	6.6			
(17) Asian-Pacific American-owned DBE	33	$29,438	$57,308	6.0			
(18) Subcontinent Asian American-owned DBE	19	$2,716	$6,645	0.7			
(19) Hispanic American-owned DBE	129	$48,147	$170,174	17.7			
(20) Native American-owned DBE	17	$1,166	$12,172	1.3			
(21) White male-owned DBE	1	$13	$146	0.0			
(22) Unknown DBE-MBE	43	$3,478					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-19.
Agency: Local Agency
Funding: Federal
Type: Construction
Time Period: May-Dec 2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample		(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %		(e) Utilization benchmark (availability) %		(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	97		$7,383	$10,629						
(2) MBE/WBE	43			$3,421	32.2		32.1		0.1	100.3
(3) WBE	5			$163	1.5		12.6		-11.1	12.1
(4) MBE	38	$2,377	$2,264	$3,258	30.7					157.4
(5) African American-owned	1	$113	$23	$34	0.3		2.5		-2.1	13.2
(6) Total Asian American-owned	13		$1,244	$1,823	17.1	19.5	2.6	11.2	14.5	650.9
(7) Asian-Pacific American-owned	9		$740	$1,083	10.2					409.5
(8) Subcontinent Asian American-owned	4		$505	$740	7.0		0.1		6.8	4,732.2
(9) Hispanic American-owned	18		$955	$1,401	13.2	2.5	12.7	7.7	0.5	103.8
(10) Native American-owned	0		$0	$0	0.0		1.6		-1.6	0.0
(11) Unknown MBE	6		$41							
(12) DBE-certified	30		$1,276	$1,836	17.3					
(13) Women-owned DBE	2		$59	$85	0.8					
(14) Minority-owned DBE	28		$1,217	$1,751	16.5					
(14) African American-owned DBE	0		$0	$0	0.0					
(16) Total Asian American-owned DBE	10		$704	$1,035	9.7					
(17) Asian-Pacific American-owned DBE	8		$642	$944	8.9					
(18) Subcontinent Asian American-owned DBE	2		$62	$91	0.9					
(19) Hispanic American-owned DBE	14		$485	$715	6.7					
(20) Native American-owned DBE	0		$0	$0	0.0					
(21) White male-owned DBE	0		$0	$0	0.0					
(22) Unknown DBE-MBE	4		$29							
(23) Unknown DBE	0		$0							

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-20.
Agency: Local Agency
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	30	$57,918	$265,498				
(2) MBE/WBE	3		$11,113	4.2	21.6	-17.4	19.4
(3) WBE	2		$11,081	4.2	5.7	-1.6	72.8
(4) MBE	1	$1,913	$32	0.0	15.9	-15.8	0.1
(5) African American-owned	0	$1,908 $0	$0	0.0	1.6	-1.6	0.0
(6) Total Asian American-owned	1	$5	$32	0.0	7.1	-7.1	0.2
(7) Asian-Pacific American-owned	1	$5 $5	$32	0.0	4.3	-4.3	0.3
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	2.8	-2.8	0.0
(9) Hispanic American-owned	0	$0	$0	0.0	5.8	-5.8	0.0
(10) Native American-owned	0	$0	$0	0.0	1.4	-1.4	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	0	$0	$0	0.0			
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	0	$0	$0	0.0			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	0	$0	$0	0.0			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	0	$0	$0	0.0			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-21.
Agency: Local Agency
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	87	$11,462	$62,641				
(2) MBE/WBE	41		$19,301	30.8	34.8	-4.0	88.5
(3) WBE	13		$2,615	4.2	12.3	-8.1	34.0
(4) MBE	28	$3,421	$16,686	26.6	22.5	4.1	118.2
(5) African American-owned	0	$1,134 $0	$0	0.0	2.4	-2.4	0.0
(6) Total Asian American-owned	14	$2,287 $1,514	$8,678	13.9	12.1	1.7	114.3
(7) Asian-Pacific American-owned	9	$501	$6,189	9.9			116.4
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	3.6	-3.6	0.0
(9) Hispanic American-owned	11	$530	$8,008	12.8	8.5	1.4	184.2
(10) Native American-owned	0	$0	$0	0.0	1.1	-1.1	0.0
(11) Unknown MBE	3	$244			6.9	5.8	
(12) DBE-certified	20	$1,002	$12,819	20.5			
(13) Women-owned DBE	6	$236	$1,332	2.1			
(14) Minority-owned DBE	14	$766	$11,487	18.3			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	9	$501	$6,019	9.6			
(17) Asian-Pacific American-owned DBE	9	$501	$6,019	9.6			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	4	$182	$5,468	8.7			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	1	$83					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-22.
Agency: SR 125
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 11

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	123	$296,820	$296,820				
(2) MBE/WBE	37		$19,369		13.7	-7.2	47.6
(3) WBE	15		$17,035		2.3	3.4	246.3
(4) MBE	22	$19,369	$2,334	6.5 0.8	11.4	-10.6	6.9
(5) African American-owned	2	$17,035 $299	$315	5.7 0.1	3.1	-3.0	3.4
(6) Total Asian American-owned	9	$2,334 $933	$981	0.3	0.8	-0.5	40.0
(7) Asian-Pacific American-owned	4	$259	$273	0.1	0.4	-0.3	24.4
(8) Subcontinent Asian American-owned	3	$599	$629	0.2	0.4	-0.2	47.2
(9) Hispanic American-owned	9	$987	$1,038	0.3	7.3	-6.9	4.8
(10) Native American-owned	0	$0	$0	0.0	0.2	-0.2	0.0
(11) Unknown MBE	2	$114					
(12) DBE-certified	23	$4,033	$4,033	1.4			
(13) Women-owned DBE	10	$2,647	$2,711	0.9			
(14) Minority-owned DBE	12	$1,291	$1,322	0.4			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	3	$228	$256	0.1			
(17) Asian-Pacific American-owned DBE	3	$228	$256	0.1			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	7	$949	$1,066	0.4			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	2	$114					
(23) Unknown DBE	1	$94					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-23.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction and Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	6,865	$5,996,971	$8,360,307				
(2) MBE/WBE	2,852		$1,224,777	14.6	17.6	-2.9	83.4
(3) WBE	742	$308,754	$402,429	4.8			102.8
(4) MBE	2,114	$844,342	$822,617	9.8	12.9	-3.0	76.4
(5) African American-owned	110		$48,103	4.7	2.3	0.1 -1.8	24.5
(6) Total Asian American-owned	454	$535,857 $94,051	$173,445	2.1	2.6	-0.5	79.3
(7) Asian-Pacific American-owned	243	$40,396	$100,162	0.6	2.1	-0.9	56.8
(8) Subcontinent Asian American-owned	196	$37,259	$70,380	0.8	0.5	0.3	165.7
(9) Hispanic American-owned	918	$55,402 $358,405	$550,679	1.2 6.6	7.2	-0.6	91.6
(10) Native American-owned	214		$50,390		0.7	-0.1	84.4
(11) Unknown MBE	418	$21,096					
(12) DBE-certified	2,239	$21,908 $511,995	$749,228	0.6 9.0			
(13) Women-owned DBE	446		$71,774				
(14) Minority-owned DBE	1,772	$443,813	$677,383	8.1			
(14) African American-owned DBE	100	$61,141 $34,932	$42,234	0.9 0.5			
(16) Total Asian American-owned DBE	353	$75,713	$129,532	1.5			
(17) Asian-Pacific American-owned DBE	212	$48,411	$85,846	1.0			
(18) Subcontinent Asian American-owned DBE	138	$27,280	$43,623	0.5			
(19) Hispanic American-owned DBE	722	$293,610	$455,274	5.4			
(20) Native American-owned DBE	207	$21,189	$50,071	0.6			
(21) White male-owned DBE	2	$78	$339	0.0			
(22) Unknown DBE-MBE	386	$18,101					
(23) Unknown DBE	23	$7,231					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-24.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction and Engineering
Time Period: 2002-Apr 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	6,673	$5,882,603	$8,216,123				
(2) MBE/WBE	2,780		$1,205,425	14.7	17.6	-2.9	83.4
(3) WBE	731	$305,766	$398,715	4.9			103.7
(4) MBE	2,052	$831,414	$806,969	9.8	12.9	-3.1	76.0
(5) African American-owned	108		$47,382	4.7	2.4	0.2 -1.8	24.5
(6) Total Asian American-owned	434	$525,907 $92,532	$170,462	2.1	2.6	-0.6	79.0
(7) Asian-Pacific American-owned	232	$39,689	$98,160	0.6	2.1	-0.9	56.4
(8) Subcontinent Asian American-owned	187	$36,501	$69,397	0.8	0.5	0.3	165.9
(9) Hispanic American-owned	893	$54,641 $350,936	$538,700	1.2 6.6	7.2	-0.7	90.9
(10) Native American-owned	212		$50,426		0.7	-0.1	86.1
(11) Unknown MBE	405	$20,847					
(12) DBE-certified	2,184	$21,903 $508,010	$742,215	0.6 9.0			
(13) Women-owned DBE	441		$71,587				
(14) Minority-owned DBE	1,722	$440,012	$670,548	8.2			
(14) African American-owned DBE	99	$60,978 $34,249	$41,513	0.9 0.5			
(16) Total Asian American-owned DBE	338	$74,765	$127,278	1.5			
(17) Asian-Pacific American-owned DBE	202	$47,748	$83,914	1.0			
(18) Subcontinent Asian American-owned DBE	133	$26,995	$43,301	0.5			
(19) Hispanic American-owned DBE	702	$291,690	$451,413	5.5			
(20) Native American-owned DBE	205	$21,184	$50,081	0.6			
(21) White male-owned DBE	2	$78	$339	0.0			
(22) Unknown DBE-MBE	375	$17,864					
(23) Unknown DBE	22	$7,202					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-25.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction and Engineering
Time Period: May-Dec 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	192	$114,368	$144,184				
(2) MBE/WBE	72		$19,352	13.4	15.5	-2.1	86.6
(3) WBE	11		$3,714	2.6	4.8	-2.2	54.0
(4) MBE	62	$12,928	$15,647	10.9	10.7	0.1	101.1
(5) African American-owned	2	$2,987 $707	$730	0.5	2.0	-1.5	25.6
(6) Total Asian American-owned	20	$9,950 $1,519	$2,996	2.1	2.1	0.0	98.6
(7) Asian-Pacific American-owned	11	$761	$1,998	1.4	1.7	-0.3	83.4
(8) Subcontinent Asian American-owned	9	$758	$997	0.7	0.4	0.2	155.7
(9) Hispanic American-owned	25	$7,469	$11,917	8.3			141.1
(10) Native American-owned	2	$5	$5	0.0	0.8	-0.8	0.4
(11) Unknown MBE	13	$249		5.9	2.4		
(12) DBE-certified	55	$3,985	$7,013	4.9			
(13) Women-owned DBE	5	$163	$189	0.1			
(14) Minority-owned DBE	50	$3,801	$6,832	4.7			
(14) African American-owned DBE	1	$683	$712	0.5			
(16) Total Asian American-owned DBE	15	$948	$2,226	1.5			
(17) Asian-Pacific American-owned DBE	10	$663	$1,901	1.3			
(18) Subcontinent Asian American-owned DBE	5	$285	$325	0.2			
(19) Hispanic American-owned DBE	20	$1,920	$3,880	2.7			
(20) Native American-owned DBE	2	$5	$5	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	11	$237					
(23) Unknown DBE	1	$30					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-26.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	6,311	$5,794,025	$7,793,097				
(2) MBE/WBE	2,605		$1,117,587	14.3	17.0	-2.6	84.5
(3) WBE	665	$293,480	$363,463	4.7			103.6
(4) MBE	1,944	$796,589	$754,392	9.7	12.5	-2.8	77.6
(5) African American-owned	97		$45,607	4.5	2.3	-1.8	25.0
(6) Total Asian American-owned	369	$503,377 $75,957	$133,476	1.7	2.2	0.2 -0.5	77.4
(7) Asian-Pacific American-owned	189	$38,821	$84,919	0.6	1.9	-0.8	58.5
(8) Subcontinent Asian American-owned	174	$26,217	$48,094	0.6	0.4	0.3	175.1
(9) Hispanic American-owned	858	$49,400 $346,097	$524,897	1.1 6.7	7.2	-0.5	93.1
(10) Native American-owned	213		$50,412		0.7	0.0	95.9
(11) Unknown MBE	407	$20,665					
(12) DBE-certified	2,060	$21,837 $480,592	$682,909	0.6 8.8			
(13) Women-owned DBE	394		$62,686				
(14) Minority-owned DBE	1,648	$417,698	$620,344	8.0			
(14) African American-owned DBE	87	$55,948 $33,357	$39,782	0.8 0.5			
(16) Total Asian American-owned DBE	291	$60,750	$94,577	1.2			
(17) Asian-Pacific American-owned DBE	171	$43,844	$72,764	0.9			
(18) Subcontinent Asian American-owned DBE	120	$16,906	$21,813	0.3			
(19) Hispanic American-owned DBE	678	$284,234	$435,413	5.6			
(20) Native American-owned DBE	207	$21,189	$50,301	0.6			
(21) White male-owned DBE	1	$13	$147	0.0			
(22) Unknown DBE-MBE	381	$17,900					
(23) Unknown DBE	21	$7,202					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-27.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction
Time Period: 2002-Apr 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	6,128	$5,682,098	$7,663,339				
(2) MBE/WBE	2,537		$1,101,425	14.4	17.0	-2.7	84.4
(3) WBE	654	$290,493	$359,749	4.7			104.2
(4) MBE	1,886	$784,601	$741,935	9.7	12.5	-2.8	77.3
(5) African American-owned	95		$44,875	4.5	2.4	0.2 -1.8	24.9
(6) Total Asian American-owned	352	$494,368 $74,693	$131,641	1.7	2.2	-0.5	76.8
(7) Asian-Pacific American-owned	179	$38,114	$83,839	0.6	1.9	-0.8	58.2
(8) Subcontinent Asian American-owned	167	$25,698	$47,338	0.6	0.4	0.3	173.0
(9) Hispanic American-owned	834	$48,655 $339,313	$514,978	1.1 6.7	7.3	-0.5	92.6
(10) Native American-owned	211		$50,441		0.7	0.0	97.7
(11) Unknown MBE	394	$20,416					
(12) DBE-certified	2,008	$21,832 $477,525	$679,064	0.7 8.9			
(13) Women-owned DBE	389		$62,497				
(14) Minority-owned DBE	1,601	$414,815	$616,680	8.0			
(14) African American-owned DBE	86	$55,785 $32,674	$39,044	0.8 0.5			
(16) Total Asian American-owned DBE	278	$60,034	$93,472	1.2			
(17) Asian-Pacific American-owned DBE	162	$43,196	$71,762	0.9			
(18) Subcontinent Asian American-owned DBE	116	$16,838	$21,710	0.3			
(19) Hispanic American-owned DBE	659	$282,999	$433,606	5.7			
(20) Native American-owned DBE	205	$21,184	$50,295	0.7			
(21) White male-owned DBE	1	$13	$147	0.0			
(22) Unknown DBE-MBE	370	$17,663					
(23) Unknown DBE	20	$7,172					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-28.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction
Time Period: May-Dec 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	183	$111,927	$129,758				
(2) MBE/WBE	68		$16,162	12.5	13.4	-0.9	93.3
(3) WBE	11		$3,714	2.9	4.2	-1.3	68.4
(4) MBE	58	$11,988 $9,009	$12,457	9.6			104.6
(5) African American-owned	2	$2,987 $707	$733	0.6	1.8	-1.2	31.8
(6) Total Asian American-owned	17	$1,264	$1,849	1.4 9.2	0.8 0.4	0.6	169.2
(7) Asian-Pacific American-owned	10	$745	$1,092	0.8			109.1
(8) Subcontinent Asian American-owned	7	$519	$757	0.6	0.1	0.5	821.8
(9) Hispanic American-owned	24	$6,784	$9,871	7.6 0.8	0.1		131.6
(10) Native American-owned	2	$5	$5	0.0	0.8	-0.8	0.5
(11) Unknown MBE	13	$249		5.8	1.8		
(12) DBE-certified	52	$3,067	$3,845	3.0			
(13) Women-owned DBE	5	$163	$190	0.1			
(14) Minority-owned DBE	47	$2,883	$3,664	2.8			
(14) African American-owned DBE	1	$683	$740	0.6			
(16) Total Asian American-owned DBE	13	$715	$1,107	0.9			
(17) Asian-Pacific American-owned DBE	9	$647	$1,003	0.8			
(18) Subcontinent Asian American-owned DBE	4	$68	$103	0.1			
(19) Hispanic American-owned DBE	19	$1,235	$1,804	1.4			
(20) Native American-owned DBE	2	$5	$5	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	11	$237					
(23) Unknown DBE	1	$30					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-29.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	554	$202,946	$567,210				
(2) MBE/WBE	247		$107,190	18.9	25.5	-6.6	74.1
(3) WBE	77		$38,966		7.1	-0.3	96.5
(4) MBE	170	$47,752	$68,224	12.0	18.4	-6.4	65.4
(5) African American-owned	13	$15,273 $1,575	$2,537	6.9 0.4	2.4	-2.0	18.6
(6) Total Asian American-owned	85	$32,479 $18,094	$39,273	6.9	8.1	-1.2	85.7
(7) Asian-Pacific American-owned	54	$6,002	$15,055	2.7	5.5	-2.8	48.6
(8) Subcontinent Asian American-owned	22	$11,042	$21,839	3.9	2.6	1.2	147.1
(9) Hispanic American-owned	60		$26,322		6.7	-2.0	69.6
(10) Native American-owned	1	$71	$92	0.0	1.2	-1.2	1.3
(11) Unknown MBE	11	$12,308 $431		4.6			
(12) DBE-certified	179	$31,403	$66,319	11.7			
(13) Women-owned DBE	52	$5,193	$9,061	1.6			
(14) Minority-owned DBE	124	$26,115	$57,068	10.1			
(14) African American-owned DBE	13	$1,575	$2,511	0.4			
(16) Total Asian American-owned DBE	62	$14,964	$33,733	5.9			
(17) Asian-Pacific American-owned DBE	41	$4,567	$12,787	2.3			
(18) Subcontinent Asian American-owned DBE	18	$10,374	$20,885	3.7			
(19) Hispanic American-owned DBE	44	$9,375	$20,824	3.7			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	1	$65	$190	0.0			
(22) Unknown DBE-MBE	5	$201					
(23) Unknown DBE	2	$30					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-30.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	866	$4,080,149	$5,561,731				
(2) MBE/WBE	86		$246,091	4.4	10.8	-6.3	41.1
(3) WBE	19	$166,112	$116,578		2.6	-0.5	80.9
(4) MBE	67		$129,513		8.2	-5.9	28.5
(5) African American-owned	2	$82,738	$19,589	2.1	2.6	-2.3	13.5
(6) Total Asian American-owned	9	$83,375 $5,257	$20,046	2.3	0.4	1.9	-1.5	19.1
(7) Asian-Pacific American-owned	4	$19,589 $3,563	$4,493	0.4	0.1	1.7	-1.6	4.7
(8) Subcontinent Asian American-owned	5	$1,694	$15,553		0.3	0.2	0.1	154.5
(9) Hispanic American-owned	50		$71,687			3.2	-1.9	40.5
(10) Native American-owned	6	$2,580	$18,192		0.3	0.5	-0.2	65.6
(11) Unknown MBE	0	$55,949 $0		1.3			
(12) DBE-certified	53		$101,606				
(13) Women-owned DBE	0	$0	$0		0.0		
(14) Minority-owned DBE	51	$71,561	$101,606	1.8			
(14) African American-owned DBE	1	$19,331	$19,915		0.4		
(16) Total Asian American-owned DBE	7	$68,583 $4,061	$5,141	1.8	0.1		
(17) Asian-Pacific American-owned DBE	4	$3,563	$4,628		0.1		
(18) Subcontinent Asian American-owned DBE	3	$498	$513		0.0		
(19) Hispanic American-owned DBE	37	$42,611	$57,808		1.0		
(20) Native American-owned DBE	6	$2,580	$18,741		0.3		
(21) White male-owned DBE	0	$0	$0		0.0		
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	2	$2,978					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-31.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction
Time Period: 2002-Apr 2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	5,297	$1,696,620	$2,210,864				
(2) MBE/WBE	2,456		$865,923	39.2	32.1	7.0	121.9
(3) WBE	637	$209,637	$245,730	11.1			121.6
(4) MBE	1,822	$625,948	$620,453	28.1	23.0	5.1	122.0
(5) African American-owned	93		$24,347	9.1	1.7	2.0 -0.6	65.6
(6) Total Asian American-owned	343	$416,570 $69,436	$111,712	5.1	3.0	2.0	167.2
(7) Asian-Pacific American-owned	175	$18,525	$80,055	1.1	2.2	1.4	161.3
(8) Subcontinent Asian American-owned	162	$24,004	$31,187	1.4	0.8	0.6	181.6
(9) Hispanic American-owned	787	$45,092 $288,941	$452,907	3.6 20.5	17.2	3.3	119.4
(10) Native American-owned	205		$31,487		1.1	0.3	129.9
(11) Unknown MBE	394	$20,416					
(12) DBE-certified	1,957	$19,252 $406,462	$578,175	1.4 26.2			
(13) Women-owned DBE	389		$62,288				
(14) Minority-owned DBE	1,552	$346,729	$515,999	23.3			
(14) African American-owned DBE	85	$55,785 $13,343	$18,376	2.8 0.8			
(16) Total Asian American-owned DBE	271	$55,974	$88,934	4.0			
(17) Asian-Pacific American-owned DBE	158	$39,634	$67,559	3.1			
(18) Subcontinent Asian American-owned DBE	113	$16,340	$21,376	1.0			
(19) Hispanic American-owned DBE	624	$240,886	$377,454	17.1			
(20) Native American-owned DBE	199	$18,605	$30,974	1.4			
(21) White male-owned DBE	1	$13	$147	0.0			
(22) Unknown DBE-MBE	370	$17,663					
(23) Unknown DBE	18	$4,194					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-32.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction
Time Period: May-Dec 2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	148	$17,256	$20,502				
(2) MBE/WBE	63		$5,573	27.2	32.2	-5.0	84.5
(3) WBE	9		$1,155	5.6	12.4	-6.7	45.5
(4) MBE	55	$4,529	$4,426	21.6	19.8	1.8	109.1
(5) African American-owned	2	$1,105 $707	$763	3.7			169.3
(6) Total Asian American-owned	17	$3,432 $1,264	$1,926	9.4	2.1	7.3	456.5
(7) Asian-Pacific American-owned	10	$745	$1,137	5.5 2.2	1.5		301.4
(8) Subcontinent Asian American-owned	7	$519	$789	3.8	0.2	3.6	1,768.9
(9) Hispanic American-owned	21	$1,207	$1,733	8.5 1.8	13.2 3.7	-4.8	63.9
(10) Native American-owned	2	$5	$5	0.0	2.2	-2.2	1.1
(11) Unknown MBE	13	$249					
(12) DBE-certified	50	$2,569	$3,129	15.3			
(13) Women-owned DBE	5	$163	$190	0.9			
(14) Minority-owned DBE	45	$2,385	$2,947	14.4			
(14) African American-owned DBE	1	$683	$755	3.7			
(16) Total Asian American-owned DBE	13	$715	$1,129	5.5			
(17) Asian-Pacific American-owned DBE	9	$647	$1,024	5.0			
(18) Subcontinent Asian American-owned DBE	4	$68	$105	0.5			
(19) Hispanic American-owned DBE	17	$737	$1,049	5.1			
(20) Native American-owned DBE	2	$5	$5	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	11	$237					
(23) Unknown DBE	1	$30					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-33.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	127	$150,976	$430,925				
(2) MBE/WBE	26		$44,432	10.3	22.6	-12.3	45.7
(3) WBE	10	$9,851	$29,150	6.8			118.6
(4) MBE	16	$18,643	$15,281	3.5	16.9	-13.3	21.0
(5) African American-owned	0	$0	$0	0.0	5.7 2.3	1.1 -2.3	0.0
(6) Total Asian American-owned	9	$8,792 $3,850	$8,028	1.9	6.8	-4.9	27.5
(7) Asian-Pacific American-owned	7	$1,757	$1,981	0.5	4.6	-4.1	10.1
(8) Subcontinent Asian American-owned	2	$2,093	$6,048	1.4	2.2	-0.8	63.4
(9) Hispanic American-owned	7	$4,942	$7,253	1.7	6.5	-4.8	26.0
(10) Native American-owned	0	$0	$0	0.0	1.3	-1.3	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	13	$8,131	$14,499	3.4			
(13) Women-owned DBE	5	$2,032	$2,342	0.5			
(14) Minority-owned DBE	8	$6,098	$12,157	2.8			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	4	$2,895	$6,972	1.6			
(17) Asian-Pacific American-owned DBE	3	$824	$947	0.2			
(18) Subcontinent Asian American-owned DBE	1	$2,071	$6,025	1.4			
(19) Hispanic American-owned DBE	4	$3,203	$5,185	1.2			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-34.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	427	$51,971	$136,286				
(2) MBE/WBE	221	$29,109	$62,758	46.0			132.3
(3) WBE	67		$9,815	7.2	11.6	-4.4	62.0
(4) MBE	154	$23,687	$52,943	38.8	34.8 11.2		167.4
(5) African American-owned	13	$5,422 $1,575	$2,562	1.9	2.6	-0.7	71.5
(6) Total Asian American-owned	76	$14,244	$31,279	23.0	23.2 12.2 15.6	10.7	187.5
(7) Asian-Pacific American-owned	47	$4,245	$13,135	9.6			115.5
(8) Subcontinent Asian American-owned	20	$8,949	$15,741	11.5	3.9	7.7	296.5
(9) Hispanic American-owned	53	$7,367	$19,010	13.9	8.3 1.3		192.1
(10) Native American-owned	1	$71	$93	0.1	1.1	-1.0	6.4
(11) Unknown MBE	11	$431			7.3 6.7		
(12) DBE-certified	166	$23,272	$51,820	38.0			
(13) Women-owned DBE	47	$3,161	$6,719	4.9			
(14) Minority-owned DBE	116	$20,017	$44,911	33.0			
(14) African American-owned DBE	13	$1,575	$2,527	1.9			
(16) Total Asian American-owned DBE	58	$12,069	$26,767	19.6			
(17) Asian-Pacific American-owned DBE	38	$3,743	$11,892	8.7			
(18) Subcontinent Asian American-owned DBE	17	$8,303	$14,814	10.9			
(19) Hispanic American-owned DBE	40	$6,172	$15,618	11.5			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	1	$65	$190	0.1			
(22) Unknown DBE-MBE	5	$201					
(23) Unknown DBE	2	$30					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-35.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 1

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	281	$115,505	$119,683				
(2) MBE/WBE	85		$8,514	7.1	15.4	-8.2	46.3
(3) WBE	27	$5,131	$5,131	4.3			113.9
(4) MBE	58	$7,504	$3,383	2.8	11.6	-8.8	24.4
(5) African American-owned	1	$15	$16	0.0	0.5	-0.5	2.7
(6) Total Asian American-owned	5	$2,373 $233	$1,267	1.1	2.3	-1.3	45.8
(7) Asian-Pacific American-owned	4	$232	$1,266	1.1	2.2	-1.2	47.2
(8) Subcontinent Asian American-owned	1	$1	$1	0.0	0.1	-0.1	0.8
(9) Hispanic American-owned	29	$1,595	$1,778	1.5	7.1	-5.6	21.0
(10) Native American-owned	9	$296	$322	0.3	1.7	-1.4	16.1
(11) Unknown MBE	14	$235					
(12) DBE-certified	75	$4,050	$5,058	4.2			
(13) Women-owned DBE	20	$1,862	$1,862	1.6			
(14) Minority-owned DBE	55	$2,188	$3,196	2.7			
(14) African American-owned DBE	1	$15	$16	0.0			
(16) Total Asian American-owned DBE	5	$233	$1,271	1.1			
(17) Asian-Pacific American-owned DBE	4	$232	$1,270	1.1			
(18) Subcontinent Asian American-owned DBE	1	$1	$1	0.0			
(19) Hispanic American-owned DBE	27	$1,413	$1,586	1.3			
(20) Native American-owned DBE	9	$296	$323	0.3			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	13	$232					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-36.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 2

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	555	$281,371	$313,098				
(2) MBE/WBE	166		$47,058	15.0	12.7	2.3	118.4
(3) WBE	35		$6,417	2.0	4.7	-2.7	43.3
(4) MBE	131	$29,913 $24,566	$40,641	13.0			162.9
(5) African American-owned	15	$5,347 $7,184	$7,295	2.3	0.3		773.9
(6) Total Asian American-owned	10	$1,810	$1,874	0.6 8.0	0.4 5.0	0.2	147.0
(7) Asian-Pacific American-owned	8	$919	$933	0.3	0.4 2.0	-0.1	78.3
(8) Subcontinent Asian American-owned	2	$891	$940	0.3	0.0	0.3	1,135.3
(9) Hispanic American-owned	45	$6,573	$7,086	2.3	5.7	-3.5	39.4
(10) Native American-owned	34	$8,384	$24,386	7.8			518.2
(11) Unknown MBE	27	$615					
(12) DBE-certified	133	$22,578	$38,620	12.3 1.5	6.3		
(13) Women-owned DBE	12	$1,741	$1,744	0.6			
(14) Minority-owned DBE	121	$20,837	$36,877	11.8			
(14) African American-owned DBE	13	$4,105	$4,175	1.3			
(16) Total Asian American-owned DBE	9	$1,729	$1,759	0.6			
(17) Asian-Pacific American-owned DBE	8	$919	$935	0.3			
(18) Subcontinent Asian American-owned DBE	1	$810	$824	0.3			
(19) Hispanic American-owned DBE	38	$6,005	$6,519	2.1			
(20) Native American-owned DBE	34	$8,384	$24,424	7.8			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	27	$615					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-37.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 3

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	695	$435,588	$514,491				
(2) MBE/WBE	299		$90,349	17.6	15.2	2.3	115.4
(3) WBE	104		$24,135		4.5	0.2	105.3
(4) MBE	197	$79,195	$66,286	12.9	10.8	2.1	119.8
(5) African American-owned	13	$22,556	$21,461	4.7	2.5	1.7	169.0
(6) Total Asian American-owned	33	$56,711 $935	$1,164	0.2	1.0	-0.8	22.4
(7) Asian-Pacific American-owned	25	$20,868 $639	$827	4.2 0.2	0.8	-0.6	20.5
(8) Subcontinent Asian American-owned	8	$296	$338	0.1	0.2	-0.2	28.8
(9) Hispanic American-owned	82		$40,390		5.9	1.9	132.4
(10) Native American-owned	38	$3,050	$3,271	0.6	1.3	-0.7	47.5
(11) Unknown MBE	31	$30,462 $1,395		7.9			
(12) DBE-certified	187	$61,923	$68,643	13.3			
(13) Women-owned DBE	37		$10,446				
(14) Minority-owned DBE	152	$51,953	$58,269	11.3			
(14) African American-owned DBE	13	$10,041 $20,868	$21,516	2.0 4.2			
(16) Total Asian American-owned DBE	23	$673	$771	0.1			
(17) Asian-Pacific American-owned DBE	18	$496	$576	0.1			
(18) Subcontinent Asian American-owned DBE	5	$177	$195	0.0			
(19) Hispanic American-owned DBE	50	$25,918	$32,635	6.3			
(20) Native American-owned DBE	37	$3,047	$3,276	0.6			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	27	$1,376					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-38.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 4

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	656	$754,094	$1,039,183				
(2) MBE/WBE	266		$90,406		15.3	-6.6	57.0
(3) WBE	96		$26,239		4.7	-2.2	53.7
(4) MBE	171	$70,492	$64,346	8.7	10.6	-4.4	58.7
(5) African American-owned	13	$21,484 $3,492	$6,458	2.5 0.6	3.1	-2.4	20.3
(6) Total Asian American-owned	18	$49,187 $3,258	$4,694	6.2 0.5	1.2	-0.8	36.9
(7) Asian-Pacific American-owned	11	$2,314	$3,230	0.3	1.0	-0.7	32.3
(8) Subcontinent Asian American-owned	7	$945	$1,464	0.1	0.3	-0.1	53.9
(9) Hispanic American-owned	95		$52,366		5.8	-0.8	86.9
(10) Native American-owned	6	$791	$828	0.1	0.5	-0.4	17.4
(11) Unknown MBE	39	$40,496 $1,150		5.0			
(12) DBE-certified	206		$69,730				
(13) Women-owned DBE	57	$8,077	$10,339	1.0			
(14) Minority-owned DBE	149	$52,275	$59,425	6.7			
(14) African American-owned DBE	11	$3,353	$6,326	0.6			
(16) Total Asian American-owned DBE	15	$44,364 $3,005	$4,367	5.7 0.4			
(17) Asian-Pacific American-owned DBE	9	$2,240	$3,085	0.3			
(18) Subcontinent Asian American-owned DBE	6	$766	$1,282	0.1			
(19) Hispanic American-owned DBE	80	$36,019	$47,858	4.6			
(20) Native American-owned DBE	4	$661	$694	0.1			
(21) White male-owned DBE	1	$13	$146	0.0			
(22) Unknown DBE-MBE	38	$1,147					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-39.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 5

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	381	$178,928	$187,472				
(2) MBE/WBE	169		$15,814		19.2	-10.8	43.9
(3) WBE	75	$9,590	$9,973	5.3			111.2
(4) MBE	95	$15,312	$5,858	8.4 3.1	14.4	-11.3	21.7
(5) African American-owned	1	$2	$2	0.0 4.8	1.9 0.5	-1.9	0.1
(6) Total Asian American-owned	14	$5,739 $647	$819	0.4	2.3	-1.8	19.3
(7) Asian-Pacific American-owned	5	$250	$333	0.2	2.1	-1.9	8.6
(8) Subcontinent Asian American-owned	9	$397	$486	0.3	0.2	0.1	133.4
(9) Hispanic American-owned	31	$3,553	$4,350	2.3	8.8	-6.5	26.2
(10) Native American-owned	8	$562	$687	0.4	1.4	-1.0	26.0
(11) Unknown MBE	41	$976					
(12) DBE-certified	143	$9,495	$9,666	5.2			
(13) Women-owned DBE	59	$2,118	$2,736	1.5			
(14) Minority-owned DBE	84	$5,393	$6,947	3.7			
(14) African American-owned DBE	1	$2	$2	0.0			
(16) Total Asian American-owned DBE	6	$331	$552	0.3			
(17) Asian-Pacific American-owned DBE	5	$250	$426	0.2			
(18) Subcontinent Asian American-owned DBE	1	$80	$126	0.1			
(19) Hispanic American-owned DBE	27	$3,506	$5,492	2.9			
(20) Native American-owned DBE	8	$562	$880	0.5			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	41	$976					
(23) Unknown DBE	1	$2,001					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-40.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 6

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	494	$269,293	$554,732				
(2) MBE/WBE	255		$60,967	11.0	18.3	-7.3	60.2
(3) WBE	34		$4,913	0.9	6.2	-5.3	14.2
(4) MBE	221	$31,553	$56,054	10.1	12.0	-1.9	84.0
(5) African American-owned	5	$1,650 $80	$97	0.0	2.2	-2.2	0.8
(6) Total Asian American-owned	28	$29,904 $1,861	$3,676	0.7	1.5	-0.8	45.3
(7) Asian-Pacific American-owned	18	$359	$1,864	0.3	1.3	-1.0	25.7
(8) Subcontinent Asian American-owned	10	$1,502	$1,812	0.3	0.2	0.2	207.7
(9) Hispanic American-owned	79		$46,950		6.5	1.9	129.5
(10) Native American-owned	48	$3,334	$5,331	1.0	1.8	-0.8	53.5
(11) Unknown MBE	61	$22,547 $2,081	8.5				
(12) DBE-certified	204		$40,267				
(13) Women-owned DBE	25	$411	$540	0.1			
(14) Minority-owned DBE	179	$19,867	$39,727	7.3			
(14) African American-owned DBE	5	$80	$101	0.0			
(16) Total Asian American-owned DBE	21	$19,456 $775	$2,486	7.2 0.4			
(17) Asian-Pacific American-owned DBE	17	$202	$1,760	0.3			
(18) Subcontinent Asian American-owned DBE	4	$573	$726	0.1			
(19) Hispanic American-owned DBE	51	$13,273	$31,560	5.7			
(20) Native American-owned DBE	47	$3,318	$5,580	1.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	55	$2,009					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-41.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 7

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	1,095	$961,741	$1,221,830				
(2) MBE/WBE	454		$163,018		17.7	-4.3	75.4
(3) WBE	62	$115,521	$17,318	13.3	4.6	-3.2	31.0
(4) MBE	392		$145,700		13.1	-1.2	90.9
(5) African American-owned	18	$15,180 $1,022	$1,132	1.4 0.1	2.6	-2.5	3.6
(6) Total Asian American-owned	106	$100,341 $19,844	$42,962	11.9 3.5	1.9	1.6	184.4
(7) Asian-Pacific American-owned	54		$18,520		1.8	-0.3	85.3
(8) Subcontinent Asian American-owned	51	$7,779	$24,414	2.0	0.1	1.9	1,536.2
(9) Hispanic American-owned	192	$12,039	$99,698	1.5	8.2	-0.1	99.2
(10) Native American-owned	19	$1,647	$1,908	0.2	0.4	-0.3	37.5
(11) Unknown MBE	57	$71,362 $6,466		8.2			
(12) DBE-certified	377		$97,822				
(13) Women-owned DBE	43	$6,308	$6,543	0.5			
(14) Minority-owned DBE	329	$79,989	$91,279	8.0			
(14) African American-owned DBE	17	$765	$892	0.1			
(16) Total Asian American-owned DBE	87	$72,217 $15,079	$18,906	7.5 1.5			
(17) Asian-Pacific American-owned DBE	52	$11,684	$14,844	1.2			
(18) Subcontinent Asian American-owned DBE	35	$3,395	$4,062	0.3			
(19) Hispanic American-owned DBE	154	$49,853	$70,017	5.7			
(20) Native American-owned DBE	18	$1,319	$1,464	0.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	53	$5,201					
(23) Unknown DBE	5	$1,464					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-42.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 8

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	435	$864,026	$1,247,453				
(2) MBE/WBE	187		$273,895		22.3	-0.3	98.7
(3) WBE	28	$155,955	$112,848	22.0	4.6	4.4	195.0
(4) MBE	159		$161,047	12.9	17.6	-4.7	73.3
(5) African American-owned	3	$72,716 $90	$125	9.0 0.0	1.7	-1.6	0.6
(6) Total Asian American-owned	43	$83,239 $7,843	$16,446	1.3	6.5	-5.1	20.4
(7) Asian-Pacific American-owned	10	$1,532	$9,617	0.8	5.6	-4.8	13.7
(8) Subcontinent Asian American-owned	33	$6,311	$6,829	0.5	0.8	-0.3	64.4
(9) Hispanic American-owned	80	$73,629	$143,559	11.5			126.7
(10) Native American-owned	13	$912	$917	0.1	0.4	-0.3	18.0
(11) Unknown MBE	20	$764		9.1	2.4		
(12) DBE-certified	171	$81,396	$153,650	12.3			
(13) Women-owned DBE	17	$2,109	$2,119	0.2			
(14) Minority-owned DBE	148	$78,605	$151,531	12.1			
(14) African American-owned DBE	3	$90	$126	0.0			
(16) Total Asian American-owned DBE	40	$7,688	$16,336	1.3			
(17) Asian-Pacific American-owned DBE	10	$1,532	$9,663	0.8			
(18) Subcontinent Asian American-owned DBE	30	$6,156	$6,673	0.5			
(19) Hispanic American-owned DBE	73	$69,155	$134,148	10.8			
(20) Native American-owned DBE	13	$912	$921	0.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	19	$759					
(23) Unknown DBE	6	$683					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-43.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 9

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	56	$31,135	$31,135				
(2) MBE/WBE	29		$1,480	4.8	18.6	-13.8	25.6
(3) WBE	4		$216	0.7	4.5	-3.8	15.5
(4) MBE	25	$1,480	$1,264	4.1	14.1	-10.1	28.8
(5) African American-owned	0	$0	$0	0.0	2.1	-2.1	0.0
(6) Total Asian American-owned	7	$216 $1,264 $417	$429	1.4	2.2	-0.8	64.1
(7) Asian-Pacific American-owned	2	$91	$93	0.3	2.1	-1.8	14.2
(8) Subcontinent Asian American-owned	5	$327	$336	1.1	0.0	1.0	2,255.5
(9) Hispanic American-owned	9	$425	$437	1.4	7.3	-5.9	19.3
(10) Native American-owned	6	$387	$398	1.3	2.6	-1.3	48.8
(11) Unknown MBE	3	$35					
(12) DBE-certified	27	$1,375	$1,375	4.4			
(13) Women-owned DBE	4	$216	$216	0.7			
(14) Minority-owned DBE	23	$1,158	$1,158	3.7			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	6	$330	$341	1.1			
(17) Asian-Pacific American-owned DBE	2	$91	$93	0.3			
(18) Subcontinent Asian American-owned DBE	4	$240	$247	0.8			
(19) Hispanic American-owned DBE	8	$406	$419	1.3			
(20) Native American-owned DBE	6	$387	$399	1.3			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	3	$35					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-44.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 10

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	372	$262,951	$427,023				
(2) MBE/WBE	160		$42,020		16.2	-6.4	60.7
(3) WBE	49		$10,710	2.5	5.5	-3.0	45.7
(4) MBE	111	$26,449	$31,310	9.8	10.7	-3.4	68.4
(5) African American-owned	4	$9,010 $908	$1,242	0.3	2.0	-1.8	14.2
(6) Total Asian American-owned	10	$17,438 $680	$850	7.3 0.2	1.2	-1.0	16.9
(7) Asian-Pacific American-owned	7	$205	$319	0.1	1.0	-1.0	7.2
(8) Subcontinent Asian American-owned	3	$476	$531	0.1	0.1	0.0	92.4
(9) Hispanic American-owned	48		$17,937		6.4	-2.2	65.2
(10) Native American-owned	20	$1,549	$11,281	2.6			252.4
(11) Unknown MBE	29	$13,140 $1,162		4.2			
(12) DBE-certified	103		$24,702	1.0	1.6		
(13) Women-owned DBE	19	$1,273	$1,357	0.3			
(14) Minority-owned DBE	84	$13,849	$23,346	5.8			
(14) African American-owned DBE	2	$20	$21	0.0			
(16) Total Asian American-owned DBE	10	$12,577 $680	$818	5.5 0.2			
(17) Asian-Pacific American-owned DBE	7	$205	$307	0.1			
(18) Subcontinent Asian American-owned DBE	3	$476	$511	0.1			
(19) Hispanic American-owned DBE	29	$9,623	$11,839	2.8			
(20) Native American-owned DBE	19	$1,379	$10,667	2.5			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	24	$875					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-45.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 11

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	786	$928,768	$1,003,602				
(2) MBE/WBE	340		$169,523		16.5	0.4	102.3
(3) WBE	123	$99,151	$100,765	10.0			261.6
(4) MBE	217	$164,891	$68,759	16.9 6.9	12.7	-5.8	54.1
(5) African American-owned	15	$2,213	$2,401	0.2	3.8 2.9	6.2 -2.7	8.3
(6) Total Asian American-owned	37	$65,740 $6,169	$7,388	0.7	0.8	0.0	97.8
(7) Asian-Pacific American-owned	12	$1,223	$1,323	0.1	0.5	-0.4	25.7
(8) Subcontinent Asian American-owned	23	$4,871	$5,984	0.6	0.2	0.4	248.1
(9) Hispanic American-owned	92		$58,186		8.7	-2.9	66.7
(10) Native American-owned	9	$684	$783	0.1	0.3	-0.3	23.7
(11) Unknown MBE	64	$53,033 $3,641		5.8			
(12) DBE-certified	274		$81,416				
(13) Women-owned DBE	86		$16,311				
(14) Minority-owned DBE	183	$78,857	$65,105	8.1			
(14) African American-owned DBE	13	$15,369 $1,913	$2,173	1.6 0.2			
(16) Total Asian American-owned DBE	23	$60,515 $3,515	$3,978	6.5 0.4			
(17) Asian-Pacific American-owned DBE	11	$1,192	$1,349	0.1			
(18) Subcontinent Asian American-owned DBE	12	$2,323	$2,628	0.3			
(19) Hispanic American-owned DBE	74	$50,762	$58,135	5.8			
(20) Native American-owned DBE	9	$684	$819	0.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	64	$3,641					
(23) Unknown DBE	5	$2,974					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-46.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 12

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	505	$710,623	$1,133,395				
(2) MBE/WBE	195		$154,544	13.6	13.7	-0.1	99.3
(3) WBE	28		$44,797		3.5	0.5	114.6
(4) MBE	167	$98,325	$109,747		10.3	-0.6	94.1
(5) African American-owned	9	$31,449 $2,948	$4,483	4.0	0.4	2.7	-2.3	14.7
(6) Total Asian American-owned	58	$66,875 $32,259	$53,400	9.7	4.7	1.8	2.9	259.7
(7) Asian-Pacific American-owned	33		$47,875			1.2	3.0	350.8
(8) Subcontinent Asian American-owned	22	$2,422	$5,157		0.5	0.6	-0.2	74.6
(9) Hispanic American-owned	76	$29,598	$51,577	4.2		5.5	-1.0	82.6
(10) Native American-owned	3	$242	$286		0.0	0.3	-0.2	9.7
(11) Unknown MBE	21	$29,282 $2,145		4.6			
(12) DBE-certified	160		$91,959				
(13) Women-owned DBE	15	$6,422	$9,089		0.8		
(14) Minority-owned DBE	141	$54,938	$82,870	8.1			
(14) African American-owned DBE	8	$2,148	$3,265		0.3		
(16) Total Asian American-owned DBE	46	$48,435 $26,711	$44,210	7.3	3.9		
(17) Asian-Pacific American-owned DBE	28	$24,801	$39,710		3.5		
(18) Subcontinent Asian American-owned DBE	18	$1,910	$4,500		0.4		
(19) Hispanic American-owned DBE	67	$18,301	$35,105		3.1		
(20) Native American-owned DBE	3	$242	$290		0.0		
(21) White male-owned DBE	0	$0	$0		0.0		
(22) Unknown DBE-MBE	17	$1,034					
(23) Unknown DBE	4	$80					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-47.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: North Region

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	56	$15,978	$56,263				
(2) MBE/WBE	27	$8,177	$29,551	52.5			182.6
(3) WBE	13		$23,513	41.8	5.4	36.4	770.8
(4) MBE	14		$6,038	10.7	28.8 23.3 23.8	-12.6	46.0
(5) African American-owned	0	$6,255 $0	$0	0.0	3.7	-3.7	0.0
(6) Total Asian American-owned	4	$1,922 $876	$2,942	5.2	9.6	-4.4	54.5
(7) Asian-Pacific American-owned	3	$607	$2,038	3.6	7.4	-3.8	49.0
(8) Subcontinent Asian American-owned	1	$269	$905	1.6	2.2	-0.6	73.2
(9) Hispanic American-owned	6	$866	$3,096	5.5	8.7	-3.2	63.1
(10) Native American-owned	0	$0	$0	0.0	1.4	-1.4	0.0
(11) Unknown MBE	4	$180					
(12) DBE-certified	16	$2,360	$6,751	12.0			
(13) Women-owned DBE	7	$658	$1,882	3.3			
(14) Minority-owned DBE	9	$1,702	$4,869	8.7			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	4	$876	$2,520	4.5			
(17) Asian-Pacific American-owned DBE	3	$607	$1,745	3.1			
(18) Subcontinent Asian American-owned DBE	1	$269	$775	1.4			
(19) Hispanic American-owned DBE	4	$817	$2,349	4.2			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	1	$10					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-48.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 4

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	128	$78,707	$187,686				
(2) MBE/WBE	54		$33,108	17.6	23.2	-5.5	76.1
(3) WBE	14		$6,715	3.6	5.1	-1.5	70.2
(4) MBE	40	$10,492	$26,393	14.1	18.1	-4.0	77.8
(5) African American-owned	3	$2,720 $370	$1,090	0.6	1.5	-0.9	38.5
(6) Total Asian American-owned	28	$7,772 $6,075	$20,746	11.1	6.8	4.2	161.8
(7) Asian-Pacific American-owned	15	$1,240	$7,133	3.8	4.0	-0.2	94.0
(8) Subcontinent Asian American-owned	7	$3,860	$11,385	6.1	2.8	3.3	217.3
(9) Hispanic American-owned	6	$1,207	$4,557	2.4	7.6	-5.1	32.1
(10) Native American-owned	0	$0	$0	0.0	2.2	-2.2	0.0
(11) Unknown MBE	3	$120					
(12) DBE-certified	41	$6,859	$23,391	12.5			
(13) Women-owned DBE	7	$383	$1,115	0.6			
(14) Minority-owned DBE	33	$6,411	$22,087	11.8			
(14) African American-owned DBE	3	$370	$1,090	0.6			
(16) Total Asian American-owned DBE	23	$4,852	$17,785	9.5			
(17) Asian-Pacific American-owned DBE	14	$972	$6,344	3.4			
(18) Subcontinent Asian American-owned DBE	7	$3,860	$11,385	6.1			
(19) Hispanic American-owned DBE	5	$1,089	$3,211	1.7			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	1	$65	$190	0.1			
(22) Unknown DBE-MBE	2	$101					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-49.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: Central Region

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	90	$25,277	$46,022				
(2) MBE/WBE	41		$12,569	27.3	32.2	-4.9	84.8
(3) WBE	17		$3,904	8.5	9.7	-1.2	87.3
(4) MBE	24	$9,058	$8,665	18.8	22.5	-3.7	83.7
(5) African American-owned	3	$3,117 $235	$294	0.6	3.2	-2.5	20.2
(6) Total Asian American-owned	12	$5,941 $1,524	$1,921	4.2	9.9	-5.8	41.9
(7) Asian-Pacific American-owned	9	$778	$978	2.1	7.3	-5.2	29.0
(8) Subcontinent Asian American-owned	1	$674	$842	1.8	2.6	-0.8	69.9
(9) Hispanic American-owned	8	$4,111	$6,362	13.8			167.7
(10) Native American-owned	1	$71	$89	0.2	1.1	-0.9	16.9
(11) Unknown MBE	0	$0		8.2	5.6		
(12) DBE-certified	25	$6,784	$9,697	21.1			
(13) Women-owned DBE	9	$1,152	$1,444	3.1			
(14) Minority-owned DBE	16	$5,632	$8,252	17.9			
(14) African American-owned DBE	3	$235	$294	0.6			
(16) Total Asian American-owned DBE	7	$1,386	$1,738	3.8			
(17) Asian-Pacific American-owned DBE	6	$712	$896	1.9			
(18) Subcontinent Asian American-owned DBE	1	$674	$842	1.8			
(19) Hispanic American-owned DBE	6	$4,011	$6,220	13.5			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-50.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 7

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	54	$22,543	$38,916				
(2) MBE/WBE	34		$12,632	32.5	29.5	2.9	110.0
(3) WBE	13		$1,630	4.2	6.9	-2.7	60.9
(4) MBE	21	$8,575	$11,002	28.3	22.6	5.6	124.9
(5) African American-owned	1	$1,176 $151	$209	0.5	4.3	-3.8	12.5
(6) Total Asian American-owned	12	$7,399 $6,363	$9,569	24.6	11.3	13.3	216.9
(7) Asian-Pacific American-owned	4	$879	$2,093	5.4	8.7	-3.3	61.9
(8) Subcontinent Asian American-owned	8	$5,484	$7,476	19.2	2.7	16.6	723.1
(9) Hispanic American-owned	8	$885	$1,224	3.1	6.2	-3.1	50.7
(10) Native American-owned	0	$0	$0	0.0	0.8	-0.8	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	29	$7,768	$11,521	29.6			
(13) Women-owned DBE	12	$1,105	$1,533	3.9			
(14) Minority-owned DBE	16	$6,641	$9,988	25.7			
(14) African American-owned DBE	1	$151	$209	0.5			
(16) Total Asian American-owned DBE	11	$6,341	$9,572	24.6			
(17) Asian-Pacific American-owned DBE	4	$879	$2,098	5.4			
(18) Subcontinent Asian American-owned DBE	7	$5,461	$7,474	19.2			
(19) Hispanic American-owned DBE	4	$149	$206	0.5			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	1	$22					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-51.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 8

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	164	$44,170	$47,262				
(2) MBE/WBE	72		$11,604	24.6	30.8	-6.3	79.6
(3) WBE	15		$1,933	4.1	12.0	-7.9	34.2
(4) MBE	57	$10,845	$9,671	20.5	18.9	1.6	108.3
(5) African American-owned	5	$1,807 $809	$869	1.8	4.0	-2.2	45.8
(6) Total Asian American-owned	24	$9,038 $3,175	$3,412	7.2	6.6	0.7	110.1
(7) Asian-Pacific American-owned	19	$2,477	$2,662	5.6			126.0
(8) Subcontinent Asian American-owned	4	$695	$746	1.6	2.1	-0.5	75.6
(9) Hispanic American-owned	26	$5,015	$5,389	11.4 4.5	1.2		150.5
(10) Native American-owned	0	$0	$0	0.0	0.7	-0.7	0.0
(11) Unknown MBE	2	$39		7.6	3.8		
(12) DBE-certified	51	$7,057	$7,551	16.0			
(13) Women-owned DBE	12	$1,696	$1,817	3.8			
(14) Minority-owned DBE	38	$5,354	$5,734	12.1			
(14) African American-owned DBE	5	$809	$867	1.8			
(16) Total Asian American-owned DBE	13	$1,433	$1,535	3.2			
(17) Asian-Pacific American-owned DBE	11	$1,381	$1,479	3.1			
(18) Subcontinent Asian American-owned DBE	1	$49	$52	0.1			
(19) Hispanic American-owned DBE	20	$3,111	$3,332	7.1			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	1	$7					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-52.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 11

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	48	$15,076	$189,867				
(2) MBE/WBE	13		$7,556	4.0	23.1	-19.1	17.2
(3) WBE	4		$1,213	0.6	7.8	-7.2	8.1
(4) MBE	9	$436	$6,343	3.3	15.2	-11.9	21.9
(5) African American-owned	0	$142 $0	$0	0.0	1.9	-1.9	0.0
(6) Total Asian American-owned	3	$294 $14	$72	0.0	8.1	-8.1	0.5
(7) Asian-Pacific American-owned	3	$14	$72	0.0	5.4	-5.4	0.7
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	2.7	-2.7	0.0
(9) Hispanic American-owned	5	$197	$6,271	3.3	4.7	-1.3	71.0
(10) Native American-owned	0	$0	$0	0.0	0.5	-0.5	0.0
(11) Unknown MBE	1	$83					
(12) DBE-certified	11	$405	$7,239	3.8			
(13) Women-owned DBE	4	$142	$1,213	0.6			
(14) Minority-owned DBE	7	$263	$6,026	3.2			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	2	$9	$34	0.0			
(17) Asian-Pacific American-owned DBE	2	$9	$34	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	4	$171	$5,991	3.2			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	1	$83					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-53.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 12

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	14	$1,194	$1,194				
(2) MBE/WBE	6		$169	14.2	29.8	-15.6	47.6
(3) WBE	1		$57	4.8	8.6	-3.9	55.2
(4) MBE	5	$169	$112	9.4	21.2	-11.7	44.5
(5) African American-owned	1	$10	$10	0.9	2.1	-1.3	40.5
(6) Total Asian American-owned	2	$57 $112 $67	$72	6.1	11.6	-5.6	52.1
(7) Asian-Pacific American-owned	1	$7	$8	0.6	8.0	-7.4	7.9
(8) Subcontinent Asian American-owned	1	$60	$65	5.4	3.6	1.8	151.6
(9) Hispanic American-owned	1	$28	$30	2.5	6.0	-3.5	41.3
(10) Native American-owned	0	$0	$0	0.0	1.3	-1.3	0.0
(11) Unknown MBE	1	$8					
(12) DBE-certified	6	$169	$169	14.2			
(13) Women-owned DBE	1	$57	$57	4.8			
(14) Minority-owned DBE	5	$112	$112	9.4			
(14) African American-owned DBE	1	$10	$10	0.9			
(16) Total Asian American-owned DBE	2	$67	$72	6.1			
(17) Asian-Pacific American-owned DBE	1	$7	$8	0.6			
(18) Subcontinent Asian American-owned DBE	1	$60	$65	5.4			
(19) Hispanic American-owned DBE	1	$28	$30	2.5			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	1	$8					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-54.
Agency: Caltrans
Funding: State
Type: Construction and Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	3,847	$1,240,060	$1,242,705				
(2) MBE/WBE	1,504		$154,348	12.4	18.2	-5.8	68.2
(3) WBE	404		$28,207		5.3	-3.0	43.1
(4) MBE	1,100	$153,874	$126,140		12.9	-2.8	78.5
(5) African American-owned	184	$27,891 $4,706	$5,288	2.3	0.4	2.0	-1.6	21.3
(6) Total Asian American-owned	213	$125,983 $14,264	$15,891	10.2	1.3	1.7	-0.4	76.7
(7) Asian-Pacific American-owned	87	$5,829	$6,523		0.5	1.5	-0.9	36.2
(8) Subcontinent Asian American-owned	124	$8,414	$9,345		0.8	0.2	0.5	350.3
(9) Hispanic American-owned	372		$93,186			8.2	-0.7	91.9
(10) Native American-owned	119		$11,776			1.1	-0.1	86.3
(11) Unknown MBE	212	$83,937 $12,519		7.5				
(12) DBE-certified	1,175	$10,556 $103,376	$103,673	0.9	8.3			
(13) Women-owned DBE	266	$9,651	$10,287		0.8			
(14) Minority-owned DBE	895		$93,386					
(14) African American-owned DBE	169	$3,705	$4,019		0.3			
(16) Total Asian American-owned DBE	160	$90,173 $9,598	$10,425	7.5	0.8			
(17) Asian-Pacific American-owned DBE	82	$3,662	$3,984		0.3			
(18) Subcontinent Asian American-owned DBE	78	$5,936	$6,441		0.5			
(19) Hispanic American-owned DBE	255	$62,412	$67,698		5.4			
(20) Native American-owned DBE	116	$10,366	$11,244		0.9			
(21) White male-owned DBE	0	$0	$0		0.0			
(22) Unknown DBE-MBE	195	$4,091					
(23) Unknown DBE	14	$3,552					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-55.
Agency: Caltrans
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	3,805	$1,232,672	$1,232,672				
(2) MBE/WBE	1,492		$153,166	12.4	18.1	-5.7	68.5
(3) WBE	399		$27,467		5.3	-3.0	42.3
(4) MBE	1,093	$153,166	$125,698		12.9	-2.7	79.2
(5) African American-owned	182	$27,467 $4,598	$5,107	2.2	0.4	2.0	-1.6	20.8
(6) Total Asian American-owned	210	$125,698 $14,198	$15,768	10.2	1.3	1.6	-0.3	79.6
(7) Asian-Pacific American-owned	85	$5,767	$6,405		0.5	1.4	-0.9	36.9
(8) Subcontinent Asian American-owned	123	$8,410	$9,341		0.8	0.2	0.6	382.8
(9) Hispanic American-owned	371		$93,176			8.2	-0.6	92.6
(10) Native American-owned	118		$11,648			1.1	-0.1	86.3
(11) Unknown MBE	212	$83,895 $12,519		7.6				
(12) DBE-certified	1,168	$10,488 $102,902	$102,902	0.9	8.3			
(13) Women-owned DBE	263	$9,271	$9,602		0.8			
(14) Minority-owned DBE	891		$93,300					
(14) African American-owned DBE	168	$3,672	$3,984		0.3			
(16) Total Asian American-owned DBE	158	$90,079 $9,579	$10,394	7.6	0.8			
(17) Asian-Pacific American-owned DBE	81	$3,648	$3,958		0.3			
(18) Subcontinent Asian American-owned DBE	77	$5,932	$6,436		0.5			
(19) Hispanic American-owned DBE	254	$62,370	$67,674		5.5			
(20) Native American-owned DBE	116	$10,366	$11,248		0.9			
(21) White male-owned DBE	0	$0	$0		0.0			
(22) Unknown DBE-MBE	195	$4,091						
(23) Unknown DBE	14	$3,552						

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-56.
Agency: Caltrans
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	42	$7,389	$10,034				
(2) MBE/WBE	12		$1,182	11.8	26.3	-14.6	44.7
(3) WBE	5	$424	$740	7.4			128.7
(4) MBE	7	$708	$442	4.4	20.6	-16.2	21.4
(5) African American-owned	2	$108	$165	1.6	5.7 2.2	1.6 -0.6	73.8
(6) Total Asian American-owned	3	$285 $66	$116	1.2	9.0	-7.9	12.8
(7) Asian-Pacific American-owned	2	$62	$109	1.1	6.8	-5.7	16.0
(8) Subcontinent Asian American-owned	1	$4	$7	0.1	2.3	-2.2	3.1
(9) Hispanic American-owned	1	$42	$42	0.4	7.9	-7.5	5.3
(10) Native American-owned	1	$68	$119	1.2	1.4	-0.2	83.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	7	$474	$771	7.7			
(13) Women-owned DBE	3	$380	$664	6.6			
(14) Minority-owned DBE	4	$93	$107	1.1			
(14) African American-owned DBE	1	$33	$33	0.3			
(16) Total Asian American-owned DBE	2	$18	$32	0.3			
(17) Asian-Pacific American-owned DBE	1	$14	$25	0.3			
(18) Subcontinent Asian American-owned DBE	1	$4	$7	0.1			
(19) Hispanic American-owned DBE	1	$42	$42	0.4			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-57.
Agency: Caltrans
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	813	$920,716	$920,716				
(2) MBE/WBE	127		$69,218		13.4	-5.9	56.1
(3) WBE	12		$9,182	1.0	4.1	-3.1	24.4
(4) MBE	115	$69,218	$60,036	7.5	9.3	-2.8	70.0
(5) African American-owned	11	$9,182 $2,667	$3,071	0.3	2.1	-1.7	16.2
(6) Total Asian American-owned	18	$60,036 $6,709	$7,727	6.5 0.8	1.2	-0.4	70.2
(7) Asian-Pacific American-owned	7	$3,678	$4,236	0.5	1.0	-0.6	45.3
(8) Subcontinent Asian American-owned	11	$3,030	$3,490	0.4	0.2	0.2	211.8
(9) Hispanic American-owned	66		$40,703		5.0	-0.6	88.5
(10) Native American-owned	19	$7,412	$8,536	0.9	1.1	-0.1	87.3
(11) Unknown MBE	1	$35,340 $7,909		4.4			
(12) DBE-certified	82		$38,501				
(13) Women-owned DBE	4	$1,995	$2,047	0.2			
(14) Minority-owned DBE	77	$38,501	$36,455	4.2			
(14) African American-owned DBE	6	$1,865	$1,913	0.2			
(16) Total Asian American-owned DBE	15	$35,540 $4,164	$4,272	4.0 0.5			
(17) Asian-Pacific American-owned DBE	5	$1,734	$1,779	0.2			
(18) Subcontinent Asian American-owned DBE	10	$2,430	$2,493	0.3			
(19) Hispanic American-owned DBE	38	$22,215	$22,786	2.5			
(20) Native American-owned DBE	18	$7,296	$7,484	0.8			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	1	$966					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-58.
Agency: Caltrans
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	2,992	$311,955	$311,955				
(2) MBE/WBE	1,365		$83,948	26.9	32.0	-5.1	84.0
(3) WBE	387		$18,286		8.7	-2.9	67.0
(4) MBE	978	$83,948	$65,662	21.0	23.3	-2.2	90.4
(5) African American-owned	171	$18,286 $1,932	$2,078	5.9 0.7	1.8	-1.1	37.5
(6) Total Asian American-owned	192	$65,662 $7,489	$8,054	2.6	2.8	-0.2	91.8
(7) Asian-Pacific American-owned	78	$2,089	$2,246	0.7	2.6	-1.8	28.1
(8) Subcontinent Asian American-owned	112	$5,380	$5,786	1.9	0.3	1.6	730.9
(9) Hispanic American-owned	305	$48,555	$52,221	16.7	17.5	-0.7	95.8
(10) Native American-owned	99	$3,076	$3,309	1.1	1.2	-0.1	89.1
(11) Unknown MBE	211	$4,610					
(12) DBE-certified	1,086	$64,401	$64,401	20.6			
(13) Women-owned DBE	259	$7,276	$7,580	2.4			
(14) Minority-owned DBE	814	$54,540	$56,821	18.2			
(14) African American-owned DBE	162	$1,808	$2,036	0.7			
(16) Total Asian American-owned DBE	143	$5,415	$6,099	2.0			
(17) Asian-Pacific American-owned DBE	76	$1,914	$2,155	0.7			
(18) Subcontinent Asian American-owned DBE	67	$3,501	$3,944	1.3			
(19) Hispanic American-owned DBE	216	$40,156	$45,228	14.5			
(20) Native American-owned DBE	98	$3,070	$3,458	1.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	195	$4,091					
(23) Unknown DBE	13	$2,586					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-59.
Agency: Caltrans
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	9	$6,129	$8,077				
(2) MBE/WBE	0		$0	0.0	24.4	-24.4	0.0
(3) WBE	0		$0	0.0	4.5	-4.5	0.0
(4) MBE	0		$0	0.0	19.9	-19.9	0.0
(5) African American-owned	0	$0 $0	$0	0.0	2.0	-2.0	0.0
(6) Total Asian American-owned	0	$0 $0	$0	0.0	8.2	-8.2	0.0
(7) Asian-Pacific American-owned	0	$0 $0	$0	0.0	6.4	-6.4	0.0
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	1.8	-1.8	0.0
(9) Hispanic American-owned	0	$0	$0	0.0	8.1	-8.1	0.0
(10) Native American-owned	0	$0	$0	0.0	1.5	-1.5	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	0	$0	$0	0.0			
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	0	$0	$0	0.0			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	0	$0	$0	0.0			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	0	$0	$0	0.0			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-60.
Agency: Caltrans
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	33	$1,259	$1,956				
(2) MBE/WBE	12	$708	$1,182	60.4	34.3	26.1	176.3
(3) WBE	5	$424	$740	37.8	10.7		352.2
(4) MBE	7		$442	22.6	23.5	-0.9	96.1
(5) African American-owned	2	$108	$165	8.4	27.1		278.4
(6) Total Asian American-owned	3	$285 $66	$116	5.9	12.3	-6.4	48.2
(7) Asian-Pacific American-owned	2	$62	$109	5.6 3.0	8.2 5.4	-2.6	67.8
(8) Subcontinent Asian American-owned	1	$4	$7	0.4	4.1	-3.7	8.8
(9) Hispanic American-owned	1	$42	$42	2.1	7.1	-5.0	30.1
(10) Native American-owned	1	$68	$119	6.1			588.1
(11) Unknown MBE	0	$0					
(12) DBE-certified	7	$474	$771	39.4 1.0	5.1		
(13) Women-owned DBE	3	$380	$664	33.9			
(14) Minority-owned DBE	4	$93	$107	5.5			
(14) African American-owned DBE	1	$33	$33	1.7			
(16) Total Asian American-owned DBE	2	$18	$32	1.6			
(17) Asian-Pacific American-owned DBE	1	$14	$25	1.3			
(18) Subcontinent Asian American-owned DBE	1	$4	$7	0.4			
(19) Hispanic American-owned DBE	1	$42	$42	2.1			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-61.
Agency: Local Agency
Funding: State
Type: Construction and Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	458	$195,518	$716,311				
(2) MBE/WBE	168		$69,886		21.2	-11.4	46.1
(3) WBE	45		$24,514	3.4	6.1	-2.7	55.7
(4) MBE	123	$22,538	$45,372	9.8	15.0	-8.7	42.2
(5) African American-owned	5	$6,811 $312	$918	0.1	2.2	-2.0	6.0
(6) Total Asian American-owned	25	$15,727 $2,028	$7,293	6.3 1.0	3.7	-2.7	27.4
(7) Asian-Pacific American-owned	15	$1,370	$5,350	0.7	2.9	-2.2	25.7
(8) Subcontinent Asian American-owned	7	$410	$1,081	0.2	0.8	-0.7	18.8
(9) Hispanic American-owned	49		$35,296		8.1	-3.2	60.8
(10) Native American-owned	10	$668	$1,865	0.3	1.0	-0.8	25.5
(11) Unknown MBE	34	$11,973 $746		4.9			
(12) DBE-certified	111	$9,545	$27,750	3.9			
(13) Women-owned DBE	16	$879	$2,669	0.4			
(14) Minority-owned DBE	94	$8,639	$25,081	3.5			
(14) African American-owned DBE	4	$182	$670	0.1			
(16) Total Asian American-owned DBE	18	$1,567	$6,511	0.9			
(17) Asian-Pacific American-owned DBE	13	$1,176	$5,363	0.7			
(18) Subcontinent Asian American-owned DBE	5	$391	$1,148	0.2			
(19) Hispanic American-owned DBE	33	$5,776	$16,441	2.3			
(20) Native American-owned DBE	9	$440	$1,459	0.2			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	30	$674					
(23) Unknown DBE	1	$27					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-62.
Agency: Local Agency
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	348	$166,995	$603,359				
(2) MBE/WBE	134		$56,264		19.8	-10.5	47.2
(3) WBE	31		$16,002	2.7	5.5	-2.9	48.1
(4) MBE	103	$18,139	$40,262	9.3	14.3	-7.6	46.8
(5) African American-owned	4	$4,144 $182	$611	0.1	2.2	-2.1	4.6
(6) Total Asian American-owned	17	$13,995 $1,444	$4,505	6.7 0.7	2.8	-2.0	27.1
(7) Asian-Pacific American-owned	10	$956	$2,955	0.5	2.3	-1.8	21.6
(8) Subcontinent Asian American-owned	5	$259	$724	0.1	0.5	-0.4	24.4
(9) Hispanic American-owned	42		$33,321		8.3	-2.7	66.9
(10) Native American-owned	9	$643	$1,825	0.3	1.0	-0.7	29.2
(11) Unknown MBE	31	$11,008 $718		5.5			
(12) DBE-certified	86	$8,130	$22,371	3.7			
(13) Women-owned DBE	9	$351	$1,024	0.2			
(14) Minority-owned DBE	77	$7,778	$21,347	3.5			
(14) African American-owned DBE	4	$182	$674	0.1			
(16) Total Asian American-owned DBE	11	$1,002	$3,427	0.6			
(17) Asian-Pacific American-owned DBE	8	$762	$2,680	0.4			
(18) Subcontinent Asian American-owned DBE	3	$240	$747	0.1			
(19) Hispanic American-owned DBE	27	$5,534	$15,847	2.6			
(20) Native American-owned DBE	8	$415	$1,399	0.2			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	27	$645					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-63.
Agency: Local Agency
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	110	$28,523	$112,952				
(2) MBE/WBE	34		$13,622	12.1	28.4	-16.4	42.4
(3) WBE	14		$8,513	7.5	9.5	-1.9	79.7
(4) MBE	20	$4,399	$5,110	4.5	19.0	-14.4	23.9
(5) African American-owned	1	$2,667 $130	$288	0.3	2.0	-1.7	13.1
(6) Total Asian American-owned	8	$1,732 $584	$2,605	2.3	8.7	-6.4	26.6
(7) Asian-Pacific American-owned	5	$414	$2,229	2.0	6.3	-4.3	31.5
(8) Subcontinent Asian American-owned	2	$151	$335	0.3	2.4	-2.1	12.3
(9) Hispanic American-owned	7	$965	$2,161	1.9	7.4	-5.4	26.0
(10) Native American-owned	1	$25	$55	0.0	1.0	-0.9	5.1
(11) Unknown MBE	3	$28					
(12) DBE-certified	25	$1,415	$5,379	4.8			
(13) Women-owned DBE	7	$528	$1,784	1.6			
(14) Minority-owned DBE	17	$861	$3,595	3.2			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	7	$565	$2,901	2.6			
(17) Asian-Pacific American-owned DBE	5	$414	$2,522	2.2			
(18) Subcontinent Asian American-owned DBE	2	$151	$379	0.3			
(19) Hispanic American-owned DBE	6	$242	$632	0.6			
(20) Native American-owned DBE	1	$25	$63	0.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	3	$28					
(23) Unknown DBE	1	$27					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-64.
Agency: Local Agency
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	61	$125,276	$470,907				
(2) MBE/WBE	8		$28,234	6.0	16.6	-10.6	36.2
(3) WBE	2		$9,742	2.1	3.9	-1.8	52.8
(4) MBE	6	$8,469	$18,492	3.9	12.6	-8.7	31.1
(5) African American-owned	0	$1,956 $0	$0	0.0	2.1	-2.1	0.0
(6) Total Asian American-owned	1	$6,513 $250	$806	0.2	2.3	-2.1	7.5
(7) Asian-Pacific American-owned	1	$250	$806	0.2	1.9	-1.7	9.1
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	0.4	-0.4	0.0
(9) Hispanic American-owned	5	$6,263	$17,686	3.8	7.3	-3.5	51.6
(10) Native American-owned	0	$0	$0	0.0	1.0	-1.0	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	2	$1,946	$4,521	1.0			
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	2	$1,946	$4,521	1.0			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	1	$250	$806	0.2			
(17) Asian-Pacific American-owned DBE	1	$250	$806	0.2			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	1	$1,697	$3,716	0.8			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-65.
Agency: Local Agency
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	287	$41,719	$132,452				
(2) MBE/WBE	126		$28,030	21.2	30.9	-9.7	68.6
(3) WBE	29		$6,260	4.7	11.0	-6.3	43.0
(4) MBE	97	$9,670	$21,770	16.4	19.9	-3.4	82.8
(5) African American-owned	4	$2,188 $182	$677	0.5	2.6	-2.0	20.0
(6) Total Asian American-owned	16	$7,482 $1,195	$3,999	3.0	4.4	-1.3	69.2
(7) Asian-Pacific American-owned	9	$706	$2,280	1.7	3.6	-1.9	47.4
(8) Subcontinent Asian American-owned	5	$259	$803	0.6	0.7	-0.1	83.1
(9) Hispanic American-owned	37	$4,744	$15,069	11.4	11.6	-0.2	98.1
(10) Native American-owned	9	$643	$2,024	1.5			123.9
(11) Unknown MBE	31	$718					
(12) DBE-certified	84	$6,184	$17,850	13.5	1.2	0.3	
(13) Women-owned DBE	9	$351	$1,024	0.8			
(14) Minority-owned DBE	75	$5,832	$16,825	12.7			
(14) African American-owned DBE	4	$182	$719	0.5			
(16) Total Asian American-owned DBE	10	$752	$2,596	2.0			
(17) Asian-Pacific American-owned DBE	7	$512	$1,800	1.4			
(18) Subcontinent Asian American-owned DBE	3	$240	$796	0.6			
(19) Hispanic American-owned DBE	26	$3,837	$12,019	9.1			
(20) Native American-owned DBE	8	$415	$1,491	1.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	27	$645					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-66.
Agency: Local Agency
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	30	$20,804	$83,023				
(2) MBE/WBE	2		$6,255	7.5	25.5	-18.0	29.6
(3) WBE	2		$6,255	7.5	8.8	-1.2	85.8
(4) MBE	0	$1,937	$0	0.0	16.7	-16.7	0.0
(5) African American-owned	0	$1,937 $0	$0	0.0	1.9	-1.9	0.0
(6) Total Asian American-owned	0	$0	$0	0.0	7.7	-7.7	0.0
(7) Asian-Pacific American-owned	0	$0 $0	$0	0.0	5.6	-5.6	0.0
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	2.0	-2.0	0.0
(9) Hispanic American-owned	0	$0	$0	0.0	6.3	-6.3	0.0
(10) Native American-owned	0	$0	$0	0.0	0.9	-0.9	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	1	$287	$926	1.1			
(13) Women-owned DBE	1	$287	$926	1.1			
(14) Minority-owned DBE	0	$0	$0	0.0			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	0	$0	$0	0.0			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	0	$0	$0	0.0			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-67.
Agency: Local Agency
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	80	$7,719	$29,929				
(2) MBE/WBE	32		$7,367	24.6	36.5	-11.9	67.4
(3) WBE	12		$2,258	7.5	11.3	-3.8	66.6
(4) MBE	20	$2,463	$5,110	17.1	25.2	-8.1	67.8
(5) African American-owned	1	$130	$288	1.0	2.2	-1.3	43.4
(6) Total Asian American-owned	8	$731 $1,732 $584	$2,605	8.7	11.5	-2.8	75.6
(7) Asian-Pacific American-owned	5	$414	$2,229	7.4	8.0	-0.5	93.2
(8) Subcontinent Asian American-owned	2	$151	$335	1.1	3.5	-2.4	31.7
(9) Hispanic American-owned	7	$965	$2,161	7.2	10.2	-3.0	70.5
(10) Native American-owned	1	$25	$55	0.2	1.1	-0.9	16.4
(11) Unknown MBE	3	$28					
(12) DBE-certified	24	$1,129	$4,454	14.9			
(13) Women-owned DBE	6	$241	$764	2.6			
(14) Minority-owned DBE	17	$861	$3,690	12.3			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	7	$565	$2,977	9.9			
(17) Asian-Pacific American-owned DBE	5	$414	$2,588	8.6			
(18) Subcontinent Asian American-owned DBE	2	$151	$389	1.3			
(19) Hispanic American-owned DBE	6	$242	$648	2.2			
(20) Native American-owned DBE	1	$25	$64	0.2			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	3	$28					
(23) Unknown DBE	1	$27					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-68.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction and Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	4,305	$1,435,578	$1,959,016				
(2) MBE/WBE	1,672		$224,234	11.4	19.3	-7.8	59.4
(3) WBE	449		$52,722		5.6	-2.9	48.2
(4) MBE	1,223	$176,412	$171,512	8.8	13.7	-4.9	64.0
(5) African American-owned	189	$34,702 $5,018	$6,201	2.7 0.3	2.1	-1.7	15.4
(6) Total Asian American-owned	238	$141,710 $16,292	$23,191	1.2	2.4	-1.2	49.2
(7) Asian-Pacific American-owned	102	$7,199	$11,888	0.6	2.0	-1.4	30.7
(8) Subcontinent Asian American-owned	131	$8,825	$10,415	0.5	0.4	0.1	124.6
(9) Hispanic American-owned	421		$128,491		8.1	-1.6	80.6
(10) Native American-owned	129		$13,630		1.1	-0.4	65.0
(11) Unknown MBE	246	$95,910 $13,265		6.6			
(12) DBE-certified	1,286	$11,225 $112,921	$131,424	0.7 6.7			
(13) Women-owned DBE	282		$12,956				
(14) Minority-owned DBE	989		$118,468				
(14) African American-owned DBE	173	$10,530 $3,887	$4,727	0.7 0.2			
(16) Total Asian American-owned DBE	178	$98,811 $11,165	$16,594	6.0 0.8			
(17) Asian-Pacific American-owned DBE	95	$4,838	$8,951	0.5			
(18) Subcontinent Asian American-owned DBE	83	$6,327	$7,644	0.4			
(19) Hispanic American-owned DBE	288	$68,188	$84,300	4.3			
(20) Native American-owned DBE	125	$10,807	$12,847	0.7			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	225	$4,765					
(23) Unknown DBE	15	$3,579					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-69.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	4,153	$1,399,667	$1,836,030				
(2) MBE/WBE	1,626		$209,430	11.4	18.7	-7.3	61.1
(3) WBE	430		$43,469		5.3	-3.0	44.3
(4) MBE	1,196	$171,305	$165,960	9.0	13.3	-4.3	67.9
(5) African American-owned	186	$31,611 $4,780	$5,721	2.4	0.3	2.1	-1.7	15.2
(6) Total Asian American-owned	227	$139,694 $15,642	$20,275	1.1	2.0	-0.9	55.8
(7) Asian-Pacific American-owned	95	$6,723	$9,357	0.5	1.7	-1.2	30.2
(8) Subcontinent Asian American-owned	128	$8,670	$10,073	0.5	0.3	0.3	187.3
(9) Hispanic American-owned	413		$126,484		8.2	-1.3	84.1
(10) Native American-owned	127		$13,480		1.1	-0.3	68.3
(11) Unknown MBE	243	$94,903 $13,237		6.9			
(12) DBE-certified	1,254	$11,131 $111,032	$125,273	0.7	6.8		
(13) Women-owned DBE	272	$9,622	$10,595		0.6		
(14) Minority-owned DBE	968		$114,678				
(14) African American-owned DBE	172	$3,854	$4,683		0.3		
(16) Total Asian American-owned DBE	169	$97,858 $10,581	$13,721	6.2	0.7		
(17) Asian-Pacific American-owned DBE	89	$4,409	$6,465		0.4		
(18) Subcontinent Asian American-owned DBE	80	$6,172	$7,256		0.4		
(19) Hispanic American-owned DBE	281	$67,904	$83,508		4.5		
(20) Native American-owned DBE	124	$10,782	$12,766		0.7		
(21) White male-owned DBE	0	$0	$0		0.0		
(22) Unknown DBE-MBE	222	$4,737					
(23) Unknown DBE	14	$3,552					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-70.
Agency: Caltrans and Local Assistance
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	152	$35,912	$122,986				
(2) MBE/WBE	46		$14,804	12.0	28.2	-16.2	42.6
(3) WBE	19		$9,252	7.5	9.2	-1.6	82.2
(4) MBE	27	$5,107	$5,552	4.5	19.1	-14.6	23.6
(5) African American-owned	3	$3,091 $238	$454	0.4	2.0	-1.6	18.7
(6) Total Asian American-owned	11	$2,017 $650	$2,720	2.2	8.7	-6.5	25.4
(7) Asian-Pacific American-owned	7	$476	$2,337	1.9	6.3	-4.4	30.2
(8) Subcontinent Asian American-owned	3	$155	$342	0.3	2.4	-2.1	11.6
(9) Hispanic American-owned	8	$1,007	$2,201	1.8	7.4	-5.6	24.2
(10) Native American-owned	2	$93	$176	0.1	1.0	-0.9	14.4
(11) Unknown MBE	3	$28					
(12) DBE-certified	32	$1,889	$6,150	5.0			
(13) Women-owned DBE	10	$908	$2,491	2.0			
(14) Minority-owned DBE	21	$954	$3,659	3.0			
(14) African American-owned DBE	1	$33	$37	0.0			
(16) Total Asian American-owned DBE	9	$584	$2,891	2.4			
(17) Asian-Pacific American-owned DBE	6	$429	$2,510	2.0			
(18) Subcontinent Asian American-owned DBE	3	$155	$381	0.3			
(19) Hispanic American-owned DBE	7	$284	$669	0.5			
(20) Native American-owned DBE	1	$25	$62	0.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	3	$28					
(23) Unknown DBE	1	$27					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-71.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	874	$1,045,993	$1,391,623				
(2) MBE/WBE	135		$97,452		14.4	-7.4	48.5
(3) WBE	14		$18,923		4.0	-2.7	33.8
(4) MBE	121	$77,687	$78,529	7.0	10.4	-4.8	54.2
(5) African American-owned	11	$11,137 $2,667	$2,965	1.4 0.2	2.1	-1.9	10.3
(6) Total Asian American-owned	19	$66,549 $6,958	$8,356	5.6 0.6	1.6	-1.0	38.5
(7) Asian-Pacific American-owned	8	$3,928	$4,987	0.4	1.3	-0.9	27.6
(8) Subcontinent Asian American-owned	11	$3,030	$3,370	0.2	0.3	0.0	93.3
(9) Hispanic American-owned	71		$58,966		5.8	-1.5	73.6
(10) Native American-owned	19	$7,412	$8,242	0.6	1.0	-0.4	57.3
(11) Unknown MBE	1	$41,604 $7,909		4.2			
(12) DBE-certified	84		$43,023				
(13) Women-owned DBE	4	$1,995	$2,041	0.1			
(14) Minority-owned DBE	79	$40,448	$40,982	3.1			
(14) African American-owned DBE	6	$1,865	$1,907	0.1			
(16) Total Asian American-owned DBE	16	$37,486 $4,414	$5,084	2.9 0.4			
(17) Asian-Pacific American-owned DBE	6	$1,984	$2,598	0.2			
(18) Subcontinent Asian American-owned DBE	10	$2,430	$2,486	0.2			
(19) Hispanic American-owned DBE	39	$23,911	$26,526	1.9			
(20) Native American-owned DBE	18	$7,296	$7,464	0.5			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	1	$966					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-72.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	3,279	$353,674	$444,407				
(2) MBE/WBE	1,491		$111,978	25.2	31.7	-6.5	79.5
(3) WBE	416		$24,546		9.4	-3.9	58.7
(4) MBE	1,075	$93,618	$87,432	19.7	22.3	-2.6	88.3
(5) African American-owned	175	$20,474 $2,114	$2,756	5.5 0.6	2.0	-1.4	30.9
(6) Total Asian American-owned	208	$73,144 $8,684	$11,919	2.7	3.3	-0.6	81.9
(7) Asian-Pacific American-owned	87	$2,795	$4,371	1.0	2.9	-1.9	34.2
(8) Subcontinent Asian American-owned	117	$5,639	$6,702	1.5	0.4	1.1	381.3
(9) Hispanic American-owned	342	$53,299	$67,518	15.2	15.7	-0.5	96.7
(10) Native American-owned	108	$3,720	$5,239	1.2			98.0
(11) Unknown MBE	242	$5,328					
(12) DBE-certified	1,170	$70,585	$82,250	18.5 1.2	0.0		
(13) Women-owned DBE	268	$7,627	$8,569	1.9			
(14) Minority-owned DBE	889	$60,372	$73,681	16.6			
(14) African American-owned DBE	166	$1,990	$2,743	0.6			
(16) Total Asian American-owned DBE	153	$6,167	$8,610	1.9			
(17) Asian-Pacific American-owned DBE	83	$2,426	$3,826	0.9			
(18) Subcontinent Asian American-owned DBE	70	$3,741	$4,784	1.1			
(19) Hispanic American-owned DBE	242	$43,993	$57,430	12.9			
(20) Native American-owned DBE	106	$3,485	$4,899	1.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	222	$4,737					
(23) Unknown DBE	13	$2,586					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-73.
Agency: Caltrans and Local Assistance
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	39	$26,933	$91,100				
(2) MBE/WBE	2		$6,255	6.9	25.4	-18.5	27.0
(3) WBE	2		$6,255	6.9	8.4	-1.5	81.7
(4) MBE	0	$1,937	$0	0.0	17.0	-17.0	0.0
(5) African American-owned	0	$1,937 $0	$0	0.0	1.9	-1.9	0.0
(6) Total Asian American-owned	0	$0	$0	0.0	7.7	-7.7	0.0
(7) Asian-Pacific American-owned	0	$0 $0	$0	0.0	5.7	-5.7	0.0
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	2.0	-2.0	0.0
(9) Hispanic American-owned	0	$0	$0	0.0	6.5	-6.5	0.0
(10) Native American-owned	0	$0	$0	0.0	0.9	-0.9	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	1	$287	$926	1.0			
(13) Women-owned DBE	1	$287	$926	1.0			
(14) Minority-owned DBE	0	$0	$0	0.0			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	0	$0	$0	0.0			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	0	$0	$0	0.0			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-74.
Agency: Caltrans and Local Assistance
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	113	$8,979	$31,886				
(2) MBE/WBE	44		$8,549	26.8	36.4	-9.6	73.7
(3) WBE	17		$2,997	9.4	11.3	-1.9	83.2
(4) MBE	27	$3,171	$5,552	17.4	25.1	-7.7	69.4
(5) African American-owned	3	$1,154 $238	$454	1.4	2.3	-0.8	62.8
(6) Total Asian American-owned	11	$2,017 $650	$2,720	8.5	11.6	-3.0	73.7
(7) Asian-Pacific American-owned	7	$476	$2,337	7.3	8.0	-0.7	91.6
(8) Subcontinent Asian American-owned	3	$155	$342	1.1	3.6	-2.5	30.1
(9) Hispanic American-owned	8	$1,007	$2,201	6.9	10.0	-3.1	68.7
(10) Native American-owned	2	$93	$176	0.6	1.1	-0.6	49.1
(11) Unknown MBE	3	$28					
(12) DBE-certified	31	$1,602	$5,225	16.4			
(13) Women-owned DBE	9	$621	$1,496	4.7			
(14) Minority-owned DBE	21	$954	$3,729	11.7			
(14) African American-owned DBE	1	$33	$38	0.1			
(16) Total Asian American-owned DBE	9	$584	$2,947	9.2			
(17) Asian-Pacific American-owned DBE	6	$429	$2,558	8.0			
(18) Subcontinent Asian American-owned DBE	3	$155	$388	1.2			
(19) Hispanic American-owned DBE	7	$284	$682	2.1			
(20) Native American-owned DBE	1	$25	$63	0.2			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	3	$28					
(23) Unknown DBE	1	$27					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-75.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-.2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 1

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	275	$127,709	$157,813				
(2) MBE/WBE	60		$15,125		14.0	-4.4	68.4
(3) WBE	17	$8,269	$9,331	5.9			135.9
(4) MBE	43	$12,883	$5,794	9.6 3.7	9.7	-6.0	38.0
(5) African American-owned	12	$26	$27	0.0 4.3	0.7 1.6	-0.7	2.5
(6) Total Asian American-owned	2	$4,613 $26	$43	0.0	1.1	-1.1	2.4
(7) Asian-Pacific American-owned	1	$13	$14	0.0	1.0	-1.0	0.8
(8) Subcontinent Asian American-owned	1	$13	$29	0.0	0.1	-0.1	21.3
(9) Hispanic American-owned	20	$4,440	$5,721	3.6	7.0	-3.4	52.0
(10) Native American-owned	1	$4	$4	0.0	0.9	-0.9	0.3
(11) Unknown MBE	8	$117					
(12) DBE-certified	37	$953	$953	0.6			
(13) Women-owned DBE	11	$754	$754	0.5			
(14) Minority-owned DBE	26	$199	$199	0.1			
(14) African American-owned DBE	12	$26	$44	0.0			
(16) Total Asian American-owned DBE	1	$13	$22	0.0			
(17) Asian-Pacific American-owned DBE	1	$13	$22	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	5	$75	$126	0.1			
(20) Native American-owned DBE	1	$4	$6	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	7	$81					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-76.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 2

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	503	$109,724	$124,218				
(2) MBE/WBE	113		$11,509		18.7	-9.4	49.6
(3) WBE	24		$2,536	2.0	8.1	-6.1	25.2
(4) MBE	89	$11,277	$8,973	9.3 7.2	10.6	-3.4	68.2
(5) African American-owned	18	$2,359 $465	$474	0.4	0.6	-0.2	65.5
(6) Total Asian American-owned	4	$8,918 $243	$248	0.2	0.8	-0.6	23.5
(7) Asian-Pacific American-owned	3	$75	$76	0.1	0.8	-0.8	7.5
(8) Subcontinent Asian American-owned	1	$168	$171	0.1	0.0	0.1	447.9
(9) Hispanic American-owned	25	$2,521	$2,627	2.1	7.1	-5.0	29.9
(10) Native American-owned	24	$5,518	$5,625	4.5			219.9
(11) Unknown MBE	18	$172					
(12) DBE-certified	100		$10,250	2.1	2.5		
(13) Women-owned DBE	13	$1,415	$1,416	1.1			
(14) Minority-owned DBE	86	$10,195 $8,775	$8,835	8.3 7.1			
(14) African American-owned DBE	17	$460	$469	0.4			
(16) Total Asian American-owned DBE	4	$243	$248	0.2			
(17) Asian-Pacific American-owned DBE	3	$75	$76	0.1			
(18) Subcontinent Asian American-owned DBE	1	$168	$171	0.1			
(19) Hispanic American-owned DBE	23	$2,383	$2,488	2.0			
(20) Native American-owned DBE	24	$5,518	$5,630	4.5			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	18	$172					
(23) Unknown DBE	1	$5					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-77.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 3

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	377	$64,192	$100,043				
(2) MBE/WBE	154		$12,086	12.1	21.4	-9.3	56.5
(3) WBE	50		$1,412	1.4	4.7	-3.3	30.2
(4) MBE	104	$11,479	$10,674	10.7	16.7	-6.0	63.9
(5) African American-owned	19	$1,082 $149	$277	0.3	1.9	-1.6	14.8
(6) Total Asian American-owned	10	$10,397 $203	$206	0.2	2.6	-2.4	7.8
(7) Asian-Pacific American-owned	10	$203	$206	0.2	2.0	-1.8	10.5
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	0.7	-0.7	0.0
(9) Hispanic American-owned	46	$7,991	$8,222	8.2	9.3	-1.1	88.4
(10) Native American-owned	16	$1,941	$1,969	2.0	2.9	-0.9	67.8
(11) Unknown MBE	13	$114					
(12) DBE-certified	98	$9,246	$9,446	9.4			
(13) Women-owned DBE	19	$190	$191	0.2			
(14) Minority-owned DBE	78	$9,031	$9,255	9.3			
(14) African American-owned DBE	17	$139	$268	0.3			
(16) Total Asian American-owned DBE	9	$32	$33	0.0			
(17) Asian-Pacific American-owned DBE	9	$32	$33	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	24	$6,814	$6,983	7.0			
(20) Native American-owned DBE	16	$1,941	$1,972	2.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	12	$104					
(23) Unknown DBE	1	$25					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-78.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 4

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	433	$269,790	$366,925				
(2) MBE/WBE	167		$34,319		15.2	-5.9	61.4
(3) WBE	65		$4,864	1.3	4.6	-3.3	28.7
(4) MBE	102	$25,433	$29,455	9.4	10.6	-2.6	75.6
(5) African American-owned	19	$3,729 $1,061	$1,098	0.3	2.4	-2.1	12.7
(6) Total Asian American-owned	11	$21,704 $2,597	$4,115	8.0 1.1	1.5	-0.3	76.3
(7) Asian-Pacific American-owned	8	$2,290	$3,097	0.8			95.1
(8) Subcontinent Asian American-owned	1	$78	$259	0.1	0.6	-0.5	12.1
(9) Hispanic American-owned	50		$23,952	0.9	6.2 0.0	0.4	106.0
(10) Native American-owned	5	$146	$289	0.1	0.6	-0.5	12.8
(11) Unknown MBE	17	$17,258 $642		6.5			
(12) DBE-certified	110		$19,254				
(13) Women-owned DBE	35	$938	$1,537	0.4			
(14) Minority-owned DBE	75	$15,383	$17,716	5.2			
(14) African American-owned DBE	18	$1,058	$1,111	0.3			
(16) Total Asian American-owned DBE	7	$14,445 $424	$1,382	4.8 0.4			
(17) Asian-Pacific American-owned DBE	6	$346	$1,119	0.3			
(18) Subcontinent Asian American-owned DBE	1	$78	$262	0.1			
(19) Hispanic American-owned DBE	30	$12,224	$14,930	4.1			
(20) Native American-owned DBE	5	$146	$294	0.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	15	$594					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-79.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 5

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	296	$56,830	$63,334				
(2) MBE/WBE	131		$11,300	17.8	22.8	-5.0	78.3
(3) WBE	48	$995	$4,862	7.7			125.6
(4) MBE	83	$7,299	$6,438	10.2	16.7	-6.5	60.9
(5) African American-owned	7	$186	$203	0.3	1.6	-1.3	20.0
(6) Total Asian American-owned	18	$6,305 $638	$699	1.1	1.7	-0.5	66.9
(7) Asian-Pacific American-owned	2	$33	$36	0.1	1.5	-1.4	3.9
(8) Subcontinent Asian American-owned	16	$605	$664	1.0	0.2	0.9	545.0
(9) Hispanic American-owned	25	$4,787	$5,274	8.3	11.4	-3.1	73.1
(10) Native American-owned	4	$132	$261	0.4	2.0	-1.6	20.4
(11) Unknown MBE	29	$562					
(12) DBE-certified	106	$5,841	$6,005	9.5			
(13) Women-owned DBE	41	$498	$529	0.8			
(14) Minority-owned DBE	65	$5,343	$5,476	8.6			
(14) African American-owned DBE	6	$33	$36	0.1			
(16) Total Asian American-owned DBE	5	$141	$158	0.2			
(17) Asian-Pacific American-owned DBE	2	$33	$36	0.1			
(18) Subcontinent Asian American-owned DBE	3	$109	$121	0.2			
(19) Hispanic American-owned DBE	21	$4,475	$5,016	7.9			
(20) Native American-owned DBE	4	$132	$266	0.4			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	29	$562					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-80.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 6

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	531	$109,937	$158,391				
(2) MBE/WBE	252		$14,827		22.3	-13.0	42.0
(3) WBE	50		$1,390	0.9	7.6	-6.7	11.6
(4) MBE	202	$10,055	$13,437	9.4 8.5	14.8	-6.3	57.5
(5) African American-owned	16	$1,089 $62	$71	0.0	2.0	-2.0	2.2
(6) Total Asian American-owned	34	$8,966 $2,258	$2,611	1.6	2.1	-0.4	78.6
(7) Asian-Pacific American-owned	11	$1,184	$1,365	0.9	1.8	-1.0	46.9
(8) Subcontinent Asian American-owned	23	$1,074	$1,246	0.8	0.3	0.5	300.4
(9) Hispanic American-owned	50	$3,673	$8,913	5.6	8.6	-3.0	65.2
(10) Native American-owned	41	$1,306	$1,842	1.2	2.0	-0.8	58.7
(11) Unknown MBE	61	$1,667					
(12) DBE-certified	198	$7,223	$8,902	5.6			
(13) Women-owned DBE	37	$810	$810	0.5			
(14) Minority-owned DBE	161	$6,413	$8,092	5.1			
(14) African American-owned DBE	15	$59	$70	0.0			
(16) Total Asian American-owned DBE	20	$1,670	$2,002	1.3			
(17) Asian-Pacific American-owned DBE	11	$1,184	$1,419	0.9			
(18) Subcontinent Asian American-owned DBE	9	$486	$583	0.4			
(19) Hispanic American-owned DBE	36	$2,418	$4,841	3.1			
(20) Native American-owned DBE	39	$963	$1,179	0.7			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	51	$1,304					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-81.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 7

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	513	$133,915	$300,522				
(2) MBE/WBE	202		$32,253	10.7	21.6	-10.9	49.7
(3) WBE	36		$5,570	1.9	5.8	-3.9	32.1
(4) MBE	166	$25,257	$26,683		15.8	-6.9	56.1
(5) African American-owned	26	$5,459 $1,679	$1,922	0.6	2.4	-1.7	26.9
(6) Total Asian American-owned	53	$19,799 $4,891	$5,971	8.9 2.0	3.2	-1.2	62.5
(7) Asian-Pacific American-owned	25	$1,559	$2,155	0.7	2.8	-2.0	26.0
(8) Subcontinent Asian American-owned	26	$3,312	$3,793	1.3	0.4	0.8	300.0
(9) Hispanic American-owned	57		$17,917		9.6	-3.7	61.9
(10) Native American-owned	9	$303	$872	0.3	0.6	-0.3	47.5
(11) Unknown MBE	21	$12,434 $492		6.0			
(12) DBE-certified	165		$23,816				
(13) Women-owned DBE	24	$351	$394	0.1			
(14) Minority-owned DBE	137	$17,099	$23,422	7.9			
(14) African American-owned DBE	22	$1,102	$1,292	0.4			
(16) Total Asian American-owned DBE	43	$16,680 $3,989	$5,057	7.8 1.7			
(17) Asian-Pacific American-owned DBE	25	$1,559	$2,207	0.7			
(18) Subcontinent Asian American-owned DBE	18	$2,430	$2,850	0.9			
(19) Hispanic American-owned DBE	43	$10,801	$16,187	5.4			
(20) Native American-owned DBE	8	$296	$886	0.3			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	21	$492					
(23) Unknown DBE	4	$68					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-82.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 8

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	256	$49,796	$55,142				
(2) MBE/WBE	107		$3,504	6.4	26.8	-20.5	23.7
(3) WBE	18		$197	0.4	6.0	-5.6	6.0
(4) MBE	89	$3,265	$3,307	6.0	20.8	-14.8	28.8
(5) African American-owned	13	$203	$211	0.4	1.3	-0.9	29.6
(6) Total Asian American-owned	33	$197 $3,068 $492	$513	0.9	2.3	-1.3	41.0
(7) Asian-Pacific American-owned	7	$69	$72	0.1	2.2	-2.0	6.1
(8) Subcontinent Asian American-owned	26	$423	$441	0.8	0.1	0.7	697.6
(9) Hispanic American-owned	29	$2,216	$2,500	4.5	16.4	-11.8	27.7
(10) Native American-owned	6	$80	$83	0.2	0.9	-0.7	17.2
(11) Unknown MBE	8	$77					
(12) DBE-certified	96	$2,340	$2,393	4.3			
(13) Women-owned DBE	15	$156	$158	0.3			
(14) Minority-owned DBE	79	$2,146	$2,234	4.1			
(14) African American-owned DBE	12	$92	$99	0.2			
(16) Total Asian American-owned DBE	30	$424	$457	0.8			
(17) Asian-Pacific American-owned DBE	7	$69	$74	0.1			
(18) Subcontinent Asian American-owned DBE	23	$355	$382	0.7			
(19) Hispanic American-owned DBE	24	$1,478	$1,593	2.9			
(20) Native American-owned DBE	6	$80	$86	0.2			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	7	$73					
(23) Unknown DBE	2	$37					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-83.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 9

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	112	$32,288	$36,765				
(2) MBE/WBE	58		$4,786	13.0	23.8	-10.8	54.7
(3) WBE	8		$244	0.7	6.6	-6.0	10.0
(4) MBE	50	$4,645	$4,542	12.4	17.2	-4.8	72.0
(5) African American-owned	8	$111	$119	0.3	1.9	-1.5	17.5
(6) Total Asian American-owned	10	$244 $4,400 $503	$538	1.5	2.3	-0.8	65.0
(7) Asian-Pacific American-owned	0	$0	$0	0.0	2.1	-2.1	0.0
(8) Subcontinent Asian American-owned	10	$503	$538	1.5	0.1	1.3	997.9
(9) Hispanic American-owned	12	$2,697	$2,920	7.9	9.4	-1.5	84.4
(10) Native American-owned	11	$902	$965	2.6	3.6	-1.0	72.2
(11) Unknown MBE	9	$187					
(12) DBE-certified	48	$3,955	$4,096	11.1			
(13) Women-owned DBE	7	$241	$241	0.7			
(14) Minority-owned DBE	41	$3,714	$3,855	10.5			
(14) African American-owned DBE	7	$93	$101	0.3			
(16) Total Asian American-owned DBE	4	$268	$290	0.8			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	4	$268	$290	0.8			
(19) Hispanic American-owned DBE	10	$2,264	$2,487	6.8			
(20) Native American-owned DBE	11	$902	$977	2.7			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	9	$187					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-84.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 10

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	249	$37,223	$54,773				
(2) MBE/WBE	120		$7,831	14.3	23.0	-8.7	62.3
(3) WBE	39		$2,503	4.6	8.7	-4.1	52.5
(4) MBE	81	$6,483	$5,328	9.7	14.3	-4.5	68.2
(5) African American-owned	13	$1,578 $337	$629	1.1	2.0	-0.9	57.1
(6) Total Asian American-owned	4	$4,905 $133	$147	0.3	1.6	-1.3	16.7
(7) Asian-Pacific American-owned	3	$53	$59	0.1	1.4	-1.3	7.4
(8) Subcontinent Asian American-owned	1	$80	$89	0.2	0.2	0.0	97.7
(9) Hispanic American-owned	35	$3,305	$3,709	6.8	9.0	-2.2	75.1
(10) Native American-owned	7	$762	$844	1.5	1.6	-0.1	95.0
(11) Unknown MBE	22	$368					
(12) DBE-certified	77	$3,818	$4,242	7.7			
(13) Women-owned DBE	16	$660	$660	1.2			
(14) Minority-owned DBE	61	$3,158	$3,581	6.5			
(14) African American-owned DBE	11	$291	$590	1.1			
(16) Total Asian American-owned DBE	2	$48	$55	0.1			
(17) Asian-Pacific American-owned DBE	2	$48	$55	0.1			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	22	$1,797	$2,078	3.8			
(20) Native American-owned DBE	7	$762	$860	1.6			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	19	$259					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-85.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 11

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	340	$145,293	$145,293				
(2) MBE/WBE	159		$19,404	13.4	19.3	-5.9	69.2
(3) WBE	57		$2,775	1.9	5.3	-3.4	36.3
(4) MBE	102	$19,404	$16,628	11.4	14.0	-2.6	81.6
(5) African American-owned	21	$2,775 $224	$479	0.3	2.6	-2.2	12.8
(6) Total Asian American-owned	13	$16,628 $644	$1,374	0.9	3.3	-2.3	28.7
(7) Asian-Pacific American-owned	3	$45	$95	0.1	3.2	-3.1	2.0
(8) Subcontinent Asian American-owned	10	$599	$1,279	0.9	0.1	0.8	939.6
(9) Hispanic American-owned	31	$6,907	$14,739	10.1			134.8
(10) Native American-owned	1	$17	$37	0.0	0.6	-0.6	4.0
(11) Unknown MBE	36	$8,836		7.5	2.6		
(12) DBE-certified	129	$8,801	$8,801	6.1			
(13) Women-owned DBE	41	$1,690	$2,317	1.6			
(14) Minority-owned DBE	86	$4,731	$6,485	4.5			
(14) African American-owned DBE	21	$224	$380	0.3			
(16) Total Asian American-owned DBE	11	$508	$861	0.6			
(17) Asian-Pacific American-owned DBE	3	$45	$76	0.1			
(18) Subcontinent Asian American-owned DBE	8	$463	$785	0.5			
(19) Hispanic American-owned DBE	20	$3,077	$5,215	3.6			
(20) Native American-owned DBE	1	$17	$29	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	33	$905					
(23) Unknown DBE	2	$2,381					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-86.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 12

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	268	$262,970	$272,812				
(2) MBE/WBE	103		$42,485	15.6	15.1	0.4	103.0
(3) WBE	18		$7,784	2.9	3.0	-0.2	94.3
(4) MBE	85	$33,825	$34,701	12.7	12.1	0.6	105.1
(5) African American-owned	14	$3,835 $278	$278	0.1	2.9	-2.8	3.6
(6) Total Asian American-owned	35	$29,991 $3,014	$3,848	1.4	1.4	0.0	102.6
(7) Asian-Pacific American-owned	22	$1,200	$1,841	0.7	1.3	-0.6	53.1
(8) Subcontinent Asian American-owned	13	$1,814	$2,007	0.7	0.1	0.6	708.2
(9) Hispanic American-owned	33	$26,674	$30,553	11.2			148.4
(10) Native American-owned	2	$21	$21	0.0	0.3	-0.3	2.5
(11) Unknown MBE	1	$3		7.5	3.7		
(12) DBE-certified	90		$27,115				
(13) Women-owned DBE	13	$1,919	$1,995	0.7			
(14) Minority-owned DBE	73	$26,178	$25,120	9.9			
(14) African American-owned DBE	14	$278	$289	0.1			
(16) Total Asian American-owned DBE	33	$23,223 $2,820	$3,511	9.2 1.3			
(17) Asian-Pacific American-owned DBE	20	$1,006	$1,424	0.5			
(18) Subcontinent Asian American-owned DBE	13	$1,814	$2,087	0.8			
(19) Hispanic American-owned DBE	23	$20,100	$21,298	7.8			
(20) Native American-owned DBE	2	$21	$22	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	1	$3					
(23) Unknown DBE	4	$1,036					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-87.
Agency: Caltrans and Local Assistance
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: North Region

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	22	$2,948	$8,890				
(2) MBE/WBE	8	$2,140	$6,813	76.6			295.8
(3) WBE	3		$6,257	70.4	6.0	64.4	1,172.0
(4) MBE	5		$556	6.3	19.9	-13.7	31.4
(5) African American-owned	0	$0	$0	0.0	2.2	-2.2	0.0
(6) Total Asian American-owned	3	$138	$447	5.0	8.9	-3.9	56.3
(7) Asian-Pacific American-owned	3	$138	$447	5.0	7.2	-2.1	70.1
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	1.8	-1.8	0.0
(9) Hispanic American-owned	2	$63	$109	1.2	7.3	-6.1	16.8
(10) Native American-owned	0	$0	$0	0.0	1.5	-1.5	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	7	$490	$1,484	16.7			
(13) Women-owned DBE	2	$289	$928	10.4			
(14) Minority-owned DBE	5	$201	$556	6.3			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	3	$138	$447	5.0			
(17) Asian-Pacific American-owned DBE	3	$138	$447	5.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	2	$63	$109	1.2			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-88.
Agency: Caltrans and Local Assistance
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 4

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	46	$8,995	$35,720				
(2) MBE/WBE	14		$2,134	6.0	30.8	-24.8	19.4
(3) WBE	7		$1,251	3.5	10.6	-7.1	32.9
(4) MBE	7	$1,003	$883	2.5	20.1	-17.7	12.3
(5) African American-owned	1	$75	$132	0.4	1.9	-1.6	19.0
(6) Total Asian American-owned	5	$558 $302	$632	1.8	9.6	-7.9	18.4
(7) Asian-Pacific American-owned	3	$445 $279	$584	1.6	6.3	-4.6	26.1
(8) Subcontinent Asian American-owned	1	$4	$7	0.0	3.4	-3.3	0.6
(9) Hispanic American-owned	0	$0	$0	0.0	7.5	-7.5	0.0
(10) Native American-owned	1	$68	$119	0.3	1.0	-0.7	32.7
(11) Unknown MBE	0	$0					
(12) DBE-certified	7	$652	$1,783	5.0			
(13) Women-owned DBE	3	$389	$1,025	2.9			
(14) Minority-owned DBE	3	$235	$758	2.1			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	3	$235	$758	2.1			
(17) Asian-Pacific American-owned DBE	2	$231	$748	2.1			
(18) Subcontinent Asian American-owned DBE	1	$4	$10	0.0			
(19) Hispanic American-owned DBE	0	$0	$0	0.0			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	1	$27					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-89.
Agency: Caltrans and Local Assistance
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: Central Region

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	25	$1,873	$11,288				
(2) MBE/WBE	4		$317	2.8	28.6	-25.8	9.8
(3) WBE	3		$168	1.5	12.0	-10.5	12.4
(4) MBE	1	$120	$149	1.3	16.6	-15.3	7.9
(5) African American-owned	0	$0	$0	0.0	1.9	-1.9	0.0
(6) Total Asian American-owned	0	$52 $0	$0	0.0	4.5	-4.5	0.0
(7) Asian-Pacific American-owned	0	$68 $0	$0	0.0	3.8	-3.8	0.0
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	0.8	-0.8	0.0
(9) Hispanic American-owned	1	$68	$149	1.3	8.8	-7.5	14.9
(10) Native American-owned	0	$0	$0	0.0	1.4	-1.4	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	2	$75	$171	1.5			
(13) Women-owned DBE	1	$7	$22	0.2			
(14) Minority-owned DBE	1	$68	$149	1.3			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	0	$0	$0	0.0			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	1	$68	$149	1.3			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-90.
Agency: Caltrans and Local Assistance
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 7

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	18	$6,105	$29,160				
(2) MBE/WBE	6		$2,083	7.1	31.5	-24.4	22.6
(3) WBE	2		$175	0.6	9.3	-8.7	6.5
(4) MBE	4	$385	$1,907	6.5	22.3	-15.7	29.4
(5) African American-owned	2	$163	$317	1.1	2.1	-1.0	51.6
(6) Total Asian American-owned	2	$22 $363 $200	$1,590	5.5	13.5	-8.0	40.4
(7) Asian-Pacific American-owned	1	$59	$1,280	4.4	9.6	-5.2	45.6
(8) Subcontinent Asian American-owned	1	$142	$310	1.1	3.9	-2.8	27.4
(9) Hispanic American-owned	0	$0	$0	0.0	5.4	-5.4	0.0
(10) Native American-owned	0	$0	$0	0.0	1.3	-1.3	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	5	$255	$1,798	6.2			
(13) Women-owned DBE	2	$22	$175	0.6			
(14) Minority-owned DBE	3	$233	$1,623	5.6			
(14) African American-owned DBE	1	$33	$33	0.1			
(16) Total Asian American-owned DBE	2	$200	$1,590	5.5			
(17) Asian-Pacific American-owned DBE	1	$59	$1,280	4.4			
(18) Subcontinent Asian American-owned DBE	1	$142	$310	1.1			
(19) Hispanic American-owned DBE	0	$0	$0	0.0			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-91.
Agency: Caltrans and Local Assistance
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 8

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	11	$9,072	$19,868				
(2) MBE/WBE	5		$1,893	9.5	19.6	-10.0	48.7
(3) WBE	1		$152	0.8	5.7	-5.0	13.4
(4) MBE	4	$865	$1,741	8.8	13.8	-5.1	63.4
(5) African American-owned	0	$0	$0	0.0	1.9	-1.9	0.0
(6) Total Asian American-owned	1	$70 $795 $9	$21	0.1	2.1	-2.0	5.0
(7) Asian-Pacific American-owned	0	$0	$0	0.0	2.0	-2.0	0.0
(8) Subcontinent Asian American-owned	1	$9	$21	0.1	0.0	0.1	231.8
(9) Hispanic American-owned	2	$783	$1,720	8.7	9.7	-1.1	89.0
(10) Native American-owned	0	$0	$0	0.0	0.1	-0.1	0.0
(11) Unknown MBE	1	$2					
(12) DBE-certified	3	$72	$158	0.8			
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	3	$72	$158	0.8			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	1	$9	$21	0.1			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	1	$9	$21	0.1			
(19) Hispanic American-owned DBE	1	$60	$137	0.7			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	1	$2					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.
Source: BBC Research and Consulting Disparity Analysis.

Figure E-92.
Agency: Caltrans and Local Assistance
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 11

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	18	$1,367	$2,840				
(2) MBE/WBE	7		$701	24.7	33.8	-9.1	73.0
(3) WBE	2		$441	15.5	18.2	-2.7	85.4
(4) MBE	5	$320	$260	9.2	15.6	-6.5	58.7
(5) African American-owned	0	$0	$0	0.0	0.5	-0.5	0.0
(6) Total Asian American-owned	0	$201 $0	$0	0.0	8.4	-8.4	0.0
(7) Asian-Pacific American-owned	0	$119 $0	$0	0.0	7.7	-7.7	0.0
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	0.7	-0.7	0.0
(9) Hispanic American-owned	3	$93	$260	9.2			143.8
(10) Native American-owned	0	$0	$0	0.0	0.3	-0.3	0.0
(11) Unknown MBE	2	$26		6.4	2.8		
(12) DBE-certified	7	$320	$701	24.7			
(13) Women-owned DBE	2	$201	$441	15.5			
(14) Minority-owned DBE	5	$119	$260	9.2			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	0	$0	$0	0.0			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	3	$93	$260	9.2			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	2	$26					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-93.
Agency: Caltrans and Local Assistance
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: District 12

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	12	$5,553	$15,219				
(2) MBE/WBE	2		$862	5.7	27.4	-21.7	20.7
(3) WBE	1		$808	5.3	7.9	-2.6	66.9
(4) MBE	1	$275	$55	0.4	19.4	-19.1	1.9
(5) African American-owned	0	$250 $0	$0	0.0	2.1	-2.1	0.0
(6) Total Asian American-owned	0	$0	$0	0.0	9.0	-9.0	0.0
(7) Asian-Pacific American-owned	0	$25 $0	$0	0.0	6.7	-6.7	0.0
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	2.3	-2.3	0.0
(9) Hispanic American-owned	0	$0	$0	0.0	7.1	-7.1	0.0
(10) Native American-owned	1	$25	$55	0.4	1.1	-0.7	33.3
(11) Unknown MBE	0	$0					
(12) DBE-certified	1	$25	$55	0.4			
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	1	$25	$55	0.4			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	0	$0	$0	0.0			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	0	$0	$0	0.0			
(20) Native American-owned DBE	1	$25	$55	0.4			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-94.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction and Engineering
Time Period: 2002
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	1,647	$1,080,896	$1,540,680				
(2) MBE/WBE	709		$258,487		18.2	-1.4	92.1
(3) WBE	177	$167,648	$107,005	16.8	5.6	1.3	123.2
(4) MBE	533		$151,546	9.8	12.6	-2.7	78.2
(5) African American-owned	31	$63,366 $6,026	$9,264	6.9 0.6	2.3	-1.7	25.8
(6) Total Asian American-owned	99	$104,346 $15,697	$36,662	2.4	2.4	0.0	100.9
(7) Asian-Pacific American-owned	54	$4,713	$16,079	1.0	2.0	-0.9	52.5
(8) Subcontinent Asian American-owned	42	$10,962	$20,519	1.3	0.4	1.0	360.1
(9) Hispanic American-owned	243		$98,415		7.2	-0.8	88.4
(10) Native American-owned	51	$4,240	$7,206	0.5	0.7	-0.2	71.2
(11) Unknown MBE	109	$73,080 $5,302		6.4			
(12) DBE-certified	567	$103,882	$146,498	9.5			
(13) Women-owned DBE	97	$9,061	$11,489	0.7			
(14) Minority-owned DBE	460		$134,879				
(14) African American-owned DBE	30	$5,549	$8,691	0.6			
(16) Total Asian American-owned DBE	86	$91,473 $13,579	$34,839	8.8 2.3			
(17) Asian-Pacific American-owned DBE	50	$4,344	$15,951	1.0			
(18) Subcontinent Asian American-owned DBE	33	$9,213	$18,823	1.2			
(19) Hispanic American-owned DBE	191	$63,092	$83,944	5.4			
(20) Native American-owned DBE	51	$4,240	$7,340	0.5			
(21) White male-owned DBE	1	$65	$194	0.0			
(22) Unknown DBE-MBE	101	$4,948					
(23) Unknown DBE	10	$3,346					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-95.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction and Engineering
Time Period: 2003
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	1,430	$1,233,685	$1,528,491				
(2) MBE/WBE	569		$240,702		18.4	-2.6	85.7
(3) WBE	155	$104,726	$106,780	7.0			127.0
(4) MBE	415	$196,431	$134,101	15.7 8.8	12.9	-4.1	68.1
(5) African American-owned	20	$1,728	$2,196	0.1	5.5 2.4	1.5 -2.2	6.0
(6) Total Asian American-owned	80	$91,884 $11,472	$14,157	0.9	2.3	-1.4	40.5
(7) Asian-Pacific American-owned	30	$3,220	$3,760	0.2	1.4	-1.1	17.7
(8) Subcontinent Asian American-owned	48	$8,177	$10,317	0.7	0.9	-0.2	74.8
(9) Hispanic American-owned	187		$111,909		7.7	-0.3	95.7
(10) Native American-owned	41	$5,510	$5,839	0.4	0.5	-0.1	72.2
(11) Unknown MBE	87	$68,968 $4,206	7.3				
(12) DBE-certified	449		$135,570				
(13) Women-owned DBE	95		$19,197				
(14) Minority-owned DBE	352	$99,155	$116,405	8.9			
(14) African American-owned DBE	18	$17,974 $1,429	$1,887	1.3 0.1			
(16) Total Asian American-owned DBE	56	$81,229 $7,301	$8,538	7.6 0.6			
(17) Asian-Pacific American-owned DBE	24	$2,964	$3,334	0.2			
(18) Subcontinent Asian American-owned DBE	32	$4,337	$5,204	0.3			
(19) Hispanic American-owned DBE	156	$63,381	$100,279	6.6			
(20) Native American-owned DBE	37	$5,193	$5,523	0.4			
(21) White male-owned DBE	1	$13	$146	0.0			
(22) Unknown DBE-MBE	84	$3,746					
(23) Unknown DBE	2	$117					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-96.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction and Engineering
Time Period: 2004
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	1,603	$1,876,149	$2,854,290				
(2) MBE/WBE	660		$382,658		15.2	-1.8	88.0
(3) WBE	180		$107,903		3.7	0.1	102.9
(4) MBE	480	$233,676	$274,755	13.4 9.6	11.6	-1.9	83.2
(5) African American-owned	23	$77,515 $5,931	$7,762	3.8 0.3	2.5	-2.2	11.0
(6) Total Asian American-owned	109	$156,162 $39,053	$85,863	3.0	1.6	1.4	189.9
(7) Asian-Pacific American-owned	62		$60,152		1.1	1.0	196.4
(8) Subcontinent Asian American-owned	39	$5,431	$23,088	0.8	0.5	0.3	158.2
(9) Hispanic American-owned	201	$32,442	$157,568	2.1	6.8	-1.3	81.1
(10) Native American-owned	61	$6,230	$23,561	0.8			117.6
(11) Unknown MBE	86	$99,894 $5,054		5.5			
(12) DBE-certified	471	$140,116	$225,536	7.9	0.7	0.1	
(13) Women-owned DBE	97		$21,362				
(14) Minority-owned DBE	370	$123,562	$204,174	7.2			
(14) African American-owned DBE	21	$16,490 $4,720	$6,153	0.7 0.2			
(16) Total Asian American-owned DBE	75	$31,118	$54,147	1.9			
(17) Asian-Pacific American-owned DBE	51	$27,248	$47,847	1.7			
(18) Subcontinent Asian American-owned DBE	24	$3,870	$6,300	0.2			
(19) Hispanic American-owned DBE	143	$77,783	$120,709	4.2			
(20) Native American-owned DBE	59	$5,831	$23,166	0.8			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	72	$4,111					
(23) Unknown DBE	4	$64					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-97.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction and Engineering
Time Period: 2005
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	1,663	$1,189,649	$1,590,987				
(2) MBE/WBE	719		$204,239		17.9	-5.0	71.9
(3) WBE	182	$152,797	$52,055	12.8	5.0	-1.7	65.7
(4) MBE	538		$152,201	9.6	12.9	-3.3	74.2
(5) African American-owned	30	$36,137 $5,612	$6,738	3.3	0.4	2.2	-1.8	19.4
(6) Total Asian American-owned	129	$116,678 $22,860	$30,797	1.9	2.0	-0.1	95.3
(7) Asian-Pacific American-owned	78		$17,688		1.7	-0.6	66.8
(8) Subcontinent Asian American-owned	49	$9,637	$12,950	0.8	0.4	0.4	222.7
(9) Hispanic American-owned	216	$13,112	$103,328	1.1	7.7	-1.2	84.3
(10) Native American-owned	50	$4,085	$11,339	0.7	1.0	-0.2	74.8
(11) Unknown MBE	113	$79,026 $5,094		6.5			
(12) DBE-certified	597	$104,102	$136,693	8.6			
(13) Women-owned DBE	132		$12,392				
(14) Minority-owned DBE	465		$124,318				
(14) African American-owned DBE	26	$10,990 $2,159	$3,066	0.8	0.2		
(16) Total Asian American-owned DBE	108	$93,123 $19,510	$26,658	7.8	1.7		
(17) Asian-Pacific American-owned DBE	71	$12,132	$16,188	1.0			
(18) Subcontinent Asian American-owned DBE	37	$7,378	$10,471	0.7			
(19) Hispanic American-owned DBE	172	$63,040	$83,137	5.2			
(20) Native American-owned DBE	49	$4,081	$11,440	0.7			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	109	$4,315					
(23) Unknown DBE	1	$7					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-98.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction and Engineering
Time Period: Jan-Apr 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	330	$502,224	$701,675				
(2) MBE/WBE	123		$119,338	17.0	23.6	-6.6	72.1
(3) WBE	37		$24,972		4.1	-0.6	86.4
(4) MBE	86	$80,861	$94,366	13.4	19.5	-6.0	69.1
(5) African American-owned	4	$24,023	$20,705	3.6	2.2	0.7	131.6
(6) Total Asian American-owned	17	$56,838 $3,448	$4,045	0.6	9.7	-9.1	5.9
(7) Asian-Pacific American-owned	8	$20,392 $1,154	$1,194	3.0 0.2	9.5	-9.3	1.8
(8) Subcontinent Asian American-owned	9	$2,295	$2,851	0.4	0.3	0.1	151.9
(9) Hispanic American-owned	46		$66,934		6.8	2.8	141.3
(10) Native American-owned	9	$1,839	$2,682	0.4	0.7	-0.4	51.9
(11) Unknown MBE	10	$29,967 $1,192		9.5			
(12) DBE-certified	100	$60,756	$97,918	14.0			
(13) Women-owned DBE	20	$6,463	$7,001	1.0			
(14) Minority-owned DBE	75	$50,625	$90,918	13.0			
(14) African American-owned DBE	4	$20,392	$21,379	3.0			
(16) Total Asian American-owned DBE	13	$3,257	$3,919	0.6			
(17) Asian-Pacific American-owned DBE	6	$1,059	$1,121	0.2			
(18) Subcontinent Asian American-owned DBE	7	$2,197	$2,798	0.4			
(19) Hispanic American-owned DBE	40	$24,393	$62,850	9.0			
(20) Native American-owned DBE	9	$1,839	$2,770	0.4			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	9	$744					
(23) Unknown DBE	5	$3,668					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-99.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction and Engineering
Time Period: 2002
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	976	$253,633	$478,799				
(2) MBE/WBE	349		$42,707		19.9	-10.9	44.9
(3) WBE	97		$12,514	2.6	5.6	-3.0	46.9
(4) MBE	252	$26,674	$30,192	8.9	14.3	-8.0	44.1
(5) African American-owned	22	$6,455 $1,098	$1,457	0.3	2.2	-1.9	13.9
(6) Total Asian American-owned	57	$20,219 $2,733	$3,761	6.3 0.8	2.1	-1.3	38.1
(7) Asian-Pacific American-owned	17	$790	$1,056	0.2	1.6	-1.4	13.7
(8) Subcontinent Asian American-owned	39	$1,739	$2,012	0.4	0.4	0.0	93.4
(9) Hispanic American-owned	106		$22,875		8.9	-4.2	53.4
(10) Native American-owned	22	$1,435	$2,099	0.4	1.1	-0.6	41.2
(11) Unknown MBE	45	$14,109 $844		4.8			
(12) DBE-certified	223		$22,465				
(13) Women-owned DBE	46	$2,476	$4,075	0.9			
(14) Minority-owned DBE	171	$16,621	$18,390	4.7			
(14) African American-owned DBE	17	$956	$1,470	0.3			
(16) Total Asian American-owned DBE	41	$11,937 $1,466	$2,152	3.8 0.4			
(17) Asian-Pacific American-owned DBE	15	$738	$1,084	0.2			
(18) Subcontinent Asian American-owned DBE	26	$728	$1,069	0.2			
(19) Hispanic American-owned DBE	61	$7,886	$13,138	2.7			
(20) Native American-owned DBE	20	$1,138	$1,630	0.3			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	32	$491					
(23) Unknown DBE	6	$2,208					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-100.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction and Engineering
Time Period: 2003
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	664	$151,420	$294,955				
(2) MBE/WBE	283		$23,413		20.9	-12.9	38.0
(3) WBE	73		$3,510	1.2	5.9	-4.7	20.1
(4) MBE	210	$16,680	$19,904	7.9	14.9	-8.2	45.2
(5) African American-owned	43	$2,327 $830	$1,098	0.4	1.8	-1.4	20.9
(6) Total Asian American-owned	29	$14,353 $1,037	$1,815	6.7 0.6	3.1	-2.5	19.9
(7) Asian-Pacific American-owned	10	$330	$720	0.2	2.5	-2.2	9.8
(8) Subcontinent Asian American-owned	18	$694	$1,080	0.4	0.6	-0.2	59.8
(9) Hispanic American-owned	63	$9,794	$14,233	4.8	8.9	-4.1	54.2
(10) Native American-owned	18	$1,772	$2,758	0.9	1.1	-0.2	83.1
(11) Unknown MBE	57	$920					
(12) DBE-certified	218	$9,104	$14,386	4.9			
(13) Women-owned DBE	49	$1,569	$2,041	0.7			
(14) Minority-owned DBE	167	$7,504	$12,345	4.2			
(14) African American-owned DBE	41	$672	$1,105	0.4			
(16) Total Asian American-owned DBE	18	$799	$1,850	0.6			
(17) Asian-Pacific American-owned DBE	10	$330	$880	0.3			
(18) Subcontinent Asian American-owned DBE	8	$469	$970	0.3			
(19) Hispanic American-owned DBE	36	$3,392	$6,032	2.0			
(20) Native American-owned DBE	17	$1,766	$3,358	1.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	55	$874					
(23) Unknown DBE	2	$31					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-101.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction and Engineering
Time Period: 2004
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	680	$131,453	$247,372				
(2) MBE/WBE	256		$40,884	16.5	24.8	-8.3	66.5
(3) WBE	66		$16,758	6.8	7.3	-0.5	93.2
(4) MBE	190	$23,812	$24,127		17.6	-7.8	55.5
(5) African American-owned	29	$6,175 $593	$610	0.2	2.2	-2.0	11.2
(6) Total Asian American-owned	38	$17,637 $2,993	$6,502	9.8 2.6	5.4	-2.8	48.6
(7) Asian-Pacific American-owned	20	$1,163	$4,341	1.8	4.2	-2.4	42.1
(8) Subcontinent Asian American-owned	15	$1,778	$2,029	0.8	1.2	-0.4	66.4
(9) Hispanic American-owned	55		$14,400		8.7	-2.9	66.9
(10) Native American-owned	31	$2,510	$2,614	1.1	1.3	-0.2	84.2
(11) Unknown MBE	37	$10,886 $654		5.8			
(12) DBE-certified	188		$17,587				
(13) Women-owned DBE	37	$715	$1,127	0.5			
(14) Minority-owned DBE	151	$13,607	$16,460	7.1			
(14) African American-owned DBE	27	$445	$459	0.2			
(16) Total Asian American-owned DBE	28	$12,892 $2,549	$5,689	6.7 2.3			
(17) Asian-Pacific American-owned DBE	18	$969	$3,861	1.6			
(18) Subcontinent Asian American-owned DBE	10	$1,580	$1,827	0.7			
(19) Hispanic American-owned DBE	33	$6,926	$7,694	3.1			
(20) Native American-owned DBE	31	$2,510	$2,619	1.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	32	$462					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-102.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction and Engineering
Time Period: 2005
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	771	$138,425	$154,852				
(2) MBE/WBE	307		$32,561	21.0	25.8	-4.8	81.5
(3) WBE	79		$5,190	3.4	9.1	-5.7	36.9
(4) MBE	228	$26,836	$27,371	17.7	16.7	1.0	105.8
(5) African American-owned	48	$5,172 $1,239	$1,529	1.0	1.8	-0.8	55.8
(6) Total Asian American-owned	50	$21,664 $2,971	$3,112	2.0	3.6	-1.6	56.3
(7) Asian-Pacific American-owned	20	$1,034	$1,083	0.7	3.3	-2.6	21.1
(8) Subcontinent Asian American-owned	30	$1,938	$2,030	1.3	0.3	1.1	515.5
(9) Hispanic American-owned	67	$14,369	$20,711	13.4			140.1
(10) Native American-owned	25	$1,926	$2,018	1.3	1.8	-0.5	72.2
(11) Unknown MBE	38	$1,158		9.5	3.8		
(12) DBE-certified	254	$19,127	$21,273	13.7			
(13) Women-owned DBE	69	$1,756	$1,774	1.1			
(14) Minority-owned DBE	185	$17,371	$19,498	12.6			
(14) African American-owned DBE	43	$592	$642	0.4			
(16) Total Asian American-owned DBE	32	$1,740	$1,858	1.2			
(17) Asian-Pacific American-owned DBE	19	$809	$864	0.6			
(18) Subcontinent Asian American-owned DBE	13	$930	$993	0.6			
(19) Hispanic American-owned DBE	48	$12,071	$15,065	9.7			
(20) Native American-owned DBE	24	$1,811	$1,934	1.2			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	38	$1,158					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-103.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction and Engineering
Time Period: Jan-Apr 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	582	$342,998	$356,978				
(2) MBE/WBE	222		$39,020	10.9	16.3	-5.4	66.9
(3) WBE	62		$4,970	1.4	4.0	-2.6	35.1
(4) MBE	160	$37,905	$34,050		12.4	-2.8	77.1
(5) African American-owned	23	$4,794 $1,002	$1,020	0.3	2.4	-2.1	12.0
(6) Total Asian American-owned	29	$33,112 $4,382	$4,479	9.5 1.3	1.2	0.1	104.3
(7) Asian-Pacific American-owned	15	$2,669	$2,718	0.8	1.1	-0.4	67.6
(8) Subcontinent Asian American-owned	14	$1,713	$1,761	0.5	0.1	0.4	638.6
(9) Hispanic American-owned	66		$28,057		7.9	0.0	99.7
(10) Native American-owned	11	$485	$494	0.1	0.9	-0.8	15.3
(11) Unknown MBE	31	$26,654 $589		7.9			
(12) DBE-certified	182		$31,495				
(13) Women-owned DBE	37	$2,730	$2,818	0.8			
(14) Minority-owned DBE	143	$31,389	$28,677	8.8			
(14) African American-owned DBE	21	$967	$1,021	0.3			
(16) Total Asian American-owned DBE	25	$27,668 $2,607	$2,753	8.0 0.8			
(17) Asian-Pacific American-owned DBE	14	$949	$1,002	0.3			
(18) Subcontinent Asian American-owned DBE	11	$1,658	$1,751	0.5			
(19) Hispanic American-owned DBE	55	$23,021	$24,391	6.8			
(20) Native American-owned DBE	11	$485	$512	0.1			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	31	$589					
(23) Unknown DBE	2	$991					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-104.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction and Engineering
Time Period: May-Dec 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	632	$417,650	$426,059				
(2) MBE/WBE	255		$45,648	10.7	14.3	-3.6	74.8
(3) WBE	72		$9,780	2.3	4.5	-2.2	51.5
(4) MBE	183	$44,505	$35,868		9.9	-1.4	85.4
(5) African American-owned	24	$9,780 $256	$343	0.1	1.8	-1.7	4.4
(6) Total Asian American-owned	35	$34,725 $2,175	$2,917	8.4 0.7	1.1	-0.4	60.5
(7) Asian-Pacific American-owned	20	$1,213	$1,626	0.4	1.0	-0.6	39.1
(8) Subcontinent Asian American-owned	15	$962	$1,290	0.3	0.2	0.1	193.2
(9) Hispanic American-owned	64		$28,457		6.1	0.6	109.6
(10) Native American-owned	22	$3,096	$4,151	1.0			121.4
(11) Unknown MBE	38	$20,098 $9,100		6.7			
(12) DBE-certified	221		$24,217	0.8	0.2		
(13) Women-owned DBE	44	$1,284	$1,303	0.3			
(14) Minority-owned DBE	172	$23,074	$22,914	5.7			
(14) African American-owned DBE	24	$256	$275	0.1			
(16) Total Asian American-owned DBE	34	$21,440 $2,005	$2,149	5.4 0.5			
(17) Asian-Pacific American-owned DBE	19	$1,042	$1,118	0.3			
(18) Subcontinent Asian American-owned DBE	15	$962	$1,032	0.2			
(19) Hispanic American-owned DBE	55	$14,893	$17,171	4.0			
(20) Native American-owned DBE	22	$3,096	$3,319	0.8			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	37	$1,190					
(23) Unknown DBE	5	$349					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-105.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: 2002-Apr 2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	831	$3,985,478	$5,452,475				
(2) MBE/WBE	81		$235,501	4.3	10.8	-6.5	40.0
(3) WBE	17	$158,653	$114,019		2.6	-0.5	80.7
(4) MBE	64		$121,482		8.2	-6.0	27.2
(5) African American-owned	2	$80,856	$19,589	2.1	2.6	-2.3	13.7
(6) Total Asian American-owned	9	$77,798 $5,257	$20,046	2.2 0.4	1.9	-1.5	19.2
(7) Asian-Pacific American-owned	4	$19,589 $3,563	$4,493	0.4 0.1	1.7	-1.6	4.8
(8) Subcontinent Asian American-owned	5	$1,694	$15,553	0.3	0.2	0.1	155.3
(9) Hispanic American-owned	47		$63,656		3.2	-2.0	36.9
(10) Native American-owned	6	$2,580	$18,192	0.3	0.5	-0.2	66.9
(11) Unknown MBE	0	$50,372 $0		1.2			
(12) DBE-certified	51		$100,889				
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	49	$71,063	$100,889	1.9			
(14) African American-owned DBE	1	$19,331	$19,919	0.4			
(16) Total Asian American-owned DBE	7	$68,085 $4,061	$5,142	1.9 0.1			
(17) Asian-Pacific American-owned DBE	4	$3,563	$4,629	0.1			
(18) Subcontinent Asian American-owned DBE	3	$498	$513	0.0			
(19) Hispanic American-owned DBE	35	$42,113	$57,082	1.0			
(20) Native American-owned DBE	6	$2,580	$18,745	0.3			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	2	$2,978					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-106.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: May-Dec 2006
Role: Prime Contractors
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	35	$94,671	$109,256				
(2) MBE/WBE	5	$7,459	$10,590	9.7			100.4
(3) WBE	2		$2,559	2.3	2.6	-0.2	91.1
(4) MBE	3	$5,577	$8,031	7.4	9.7	0.0	103.7
(5) African American-owned	0	$1,882 $0	$0	0.0	1.7	-1.7	0.0
(6) Total Asian American-owned	0	$0	$0	0.0	7.1 0.6	0.3 -0.6	0.0
(7) Asian-Pacific American-owned	0	$0	$0	0.0	0.6	-0.6	0.0
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	0.0	0.0	0.0
(9) Hispanic American-owned	3	$5,577	$8,031	7.4			170.2
(10) Native American-owned	0	$0	$0	0.0	0.5	-0.5	0.0
(11) Unknown MBE	0	$0		4.3	3.0		
(12) DBE-certified	2	$498	$717	0.7			
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	2	$498	$717	0.7			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	0	$0	$0	0.0			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	2	$498	$717	0.7			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-107.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-Apr 2006
Role: Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	422	$50,365	$131,054				
(2) MBE/WBE	219	$28,877	$61,646	47.0			134.5
(3) WBE	67		$9,815	7.5	11.7	-4.2	64.1
(4) MBE	152	$23,455	$51,830	39.5	35.0	12.1	170.0
(5) African American-owned	13	$5,422 $1,575	$2,564	2.0	2.6	-0.7	74.5
(6) Total Asian American-owned	74	$14,011	$30,146	23.0	23.3	12.3 16.3	10.7 187.4
(7) Asian-Pacific American-owned	46	$4,229	$12,212	9.3			111.4
(8) Subcontinent Asian American-owned	19	$8,732	$15,529	11.8	3.9	7.9	303.0
(9) Hispanic American-owned	53	$7,367	$19,027	14.5	8.4	1.0	199.0
(10) Native American-owned	1	$71	$93	0.1	1.1	-1.0	6.6
(11) Unknown MBE	11	$431			7.3	7.2	
(12) DBE-certified	164	$23,039	$50,707	38.7			
(13) Women-owned DBE	47	$3,161	$6,719	5.1			
(14) Minority-owned DBE	114	$19,784	$43,799	33.4			
(14) African American-owned DBE	13	$1,575	$2,528	1.9			
(16) Total Asian American-owned DBE	56	$11,836	$25,641	19.6			
(17) Asian-Pacific American-owned DBE	37	$3,727	$10,978	8.4			
(18) Subcontinent Asian American-owned DBE	16	$8,086	$14,601	11.1			
(19) Hispanic American-owned DBE	40	$6,172	$15,629	11.9			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	1	$65	$190	0.1			
(22) Unknown DBE-MBE	5	$201					
(23) Unknown DBE	2	$30					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-108.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-Apr 2006
Role: Primes
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	123	$150,140	$421,730				
(2) MBE/WBE	24		$42,355	10.0	22.3	-12.2	45.1
(3) WBE	10	$9,851	$29,150	6.9			123.3
(4) MBE	14	$17,936	$13,204	3.1	16.7	-13.6	18.8
(5) African American-owned	0	$0	$0	0.0	5.6 2.3	1.3 -2.3	0.0
(6) Total Asian American-owned	8	$8,084 $3,828	$8,006	1.9	6.6	-4.7	28.7
(7) Asian-Pacific American-owned	7	$1,757	$1,981	0.5	4.4	-4.0	10.6
(8) Subcontinent Asian American-owned	1	$2,071	$6,025	1.4	2.2	-0.8	65.5
(9) Hispanic American-owned	6	$4,257	$5,198	1.2	6.5	-5.2	19.0
(10) Native American-owned	0	$0	$0	0.0	1.3	-1.3	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	12	$7,446	$12,444	3.0			
(13) Women-owned DBE	5	$2,032	$2,342	0.6			
(14) Minority-owned DBE	7	$5,413	$10,102	2.4			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	4	$2,895	$6,972	1.7			
(17) Asian-Pacific American-owned DBE	3	$824	$947	0.2			
(18) Subcontinent Asian American-owned DBE	1	$2,071	$6,025	1.4			
(19) Hispanic American-owned DBE	3	$2,518	$3,130	0.7			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-109.
Agency: Caltrans
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Contracts under $10M

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	633	$937,475	$937,475				
(2) MBE/WBE	67		$55,659		15.7	-9.8	37.8
(3) WBE	12		$11,929		4.5	-3.3	28.0
(4) MBE	55	$55,659	$43,730	5.9	11.2	-6.5	41.8
(5) African American-owned	1	$11,929 $258	$258	1.3 0.0	1.6	-1.6	1.7
(6) Total Asian American-owned	7	$43,730 $4,824	$4,824	4.7 0.5	1.9	-1.4	26.5
(7) Asian-Pacific American-owned	3	$3,380	$3,380	0.4	1.9	-1.5	19.2
(8) Subcontinent Asian American-owned	4	$1,443	$1,443	0.2	0.1	0.1	252.0
(9) Hispanic American-owned	42		$36,350		6.5	-2.6	59.6
(10) Native American-owned	5	$2,298	$2,298	0.2	1.1	-0.9	22.4
(11) Unknown MBE	0	$36,350 $0		3.9			
(12) DBE-certified	43		$37,246				
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	41	$37,246	$37,246	4.0			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	6	$34,268 $3,878	$4,215	4.0 0.4			
(17) Asian-Pacific American-owned DBE	3	$3,380	$3,674	0.4			
(18) Subcontinent Asian American-owned DBE	3	$498	$541	0.1			
(19) Hispanic American-owned DBE	30	$28,092	$30,533	3.3			
(20) Native American-owned DBE	5	$2,298	$2,497	0.3			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	2	$2,978					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-110.
Agency: Local Agency
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Contracts under $10M

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	134	$249,814	$1,371,565				
(2) MBE/WBE	14		$91,877		19.8	-13.1	33.8
(3) WBE	4		$40,968	3.0	5.3	-2.3	56.1
(4) MBE	10	$16,572	$50,909	6.7 3.7	14.5	-10.8	25.6
(5) African American-owned	0	$7,128 $0	$0	0.0	1.6	-1.6	0.0
(6) Total Asian American-owned	2	$9,444 $433	$15,222	1.1	5.3	-4.2	20.8
(7) Asian-Pacific American-owned	1	$183	$1,112	0.1	5.2	-5.2	1.5
(8) Subcontinent Asian American-owned	1	$250	$14,109	1.0	0.1	0.9	1,270.2
(9) Hispanic American-owned	7	$8,729	$19,793	1.4	6.5	-5.0	22.3
(10) Native American-owned	1	$282	$15,894	1.2			107.8
(11) Unknown MBE	0	$0					
(12) DBE-certified	8	$4,114	$29,485	2.1 1.1	0.1		
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	8	$4,114	$29,485	2.1			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	1	$183	$1,112	0.1			
(17) Asian-Pacific American-owned DBE	1	$183	$1,112	0.1			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	6	$3,650	$12,479	0.9			
(20) Native American-owned DBE	1	$282	$15,894	1.2			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-111.
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Contracts under $10M

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	767	$1,187,290	$2,309,041				
(2) MBE/WBE	81		$147,536		18.1	-11.7	35.2
(3) WBE	16		$52,897		5.0	-2.7	45.8
(4) MBE	65	$72,231	$94,638	6.4	13.1	-9.0	31.2
(5) African American-owned	1	$19,057 $258	$258	2.3 0.0	1.6	-1.6	0.7
(6) Total Asian American-owned	9	$53,174 $5,257	$20,046	4.1 0.9	3.9	-3.1	22.0
(7) Asian-Pacific American-owned	4	$3,563	$4,493	0.2	3.9	-3.7	5.0
(8) Subcontinent Asian American-owned	5	$1,694	$15,553	0.7	0.1	0.6	924.7
(9) Hispanic American-owned	49		$56,143		6.5	-4.1	37.4
(10) Native American-owned	6	$2,580	$18,192	0.8	1.1	-0.3	72.7
(11) Unknown MBE	0	$45,079 $0		2.4			
(12) DBE-certified	51		$66,731				
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	49	$41,360	$66,731	2.9			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	7	$38,382 $4,061	$5,224	2.9 0.2			
(17) Asian-Pacific American-owned DBE	4	$3,563	$4,702	0.2			
(18) Subcontinent Asian American-owned DBE	3	$498	$521	0.0			
(19) Hispanic American-owned DBE	36	$31,741	$42,466	1.8			
(20) Native American-owned DBE	6	$2,580	$19,042	0.8			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	2	$2,978					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-112.
Agency: Caltrans
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Contracts under $10M

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	798	$490,999	$490,999				
(2) MBE/WBE	127		$69,218	14.1	20.4	-6.3	69.2
(3) WBE	12		$9,182	1.9	7.1	-5.2	26.3
(4) MBE	115	$69,218	$60,036	12.2	13.3	-1.0	92.2
(5) African American-owned	11	$9,182 $2,667	$3,071	0.6	1.5	-0.8	42.9
(6) Total Asian American-owned	18	$60,036 $6,709	$7,727	1.6	1.8	-0.2	89.1
(7) Asian-Pacific American-owned	7	$3,678	$4,236	0.9	1.7	-0.8	51.8
(8) Subcontinent Asian American-owned	11	$3,030	$3,490	0.7	0.1	0.6	716.8
(9) Hispanic American-owned	66		$40,703		8.3	0.0	100.2
(10) Native American-owned	19	$7,412	$8,536	1.7			98.6
(11) Unknown MBE	1	$35,340 $7,909	8.3				
(12) DBE-certified	82		$38,501	1.8	0.0		
(13) Women-owned DBE	4	$1,995	$2,047	0.4			
(14) Minority-owned DBE	77	$38,501	$36,455	7.8			
(14) African American-owned DBE	6	$1,865	$1,913	0.4			
(16) Total Asian American-owned DBE	15	$35,540 $4,164	$4,272	7.4 0.9			
(17) Asian-Pacific American-owned DBE	5	$1,734	$1,779	0.4			
(18) Subcontinent Asian American-owned DBE	10	$2,430	$2,493	0.5			
(19) Hispanic American-owned DBE	38	$22,215	$22,786	4.6			
(20) Native American-owned DBE	18	$7,296	$7,484	1.5			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	1	$966					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-113.
Agency: Local Agency
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Contracts under $10M

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	59	$106,222	$429,178				
(2) MBE/WBE	8		$28,234	6.6	17.6	-11.0	37.4
(3) WBE	2		$9,742	2.3	4.3	-2.0	52.6
(4) MBE	6	$8,469	$18,492	4.3	13.3	-9.0	32.5
(5) African American-owned	0	$1,956 $0	$0	0.0	2.0	-2.0	0.0
(6) Total Asian American-owned	1	$6,513 $250	$806	0.2	2.5	-2.3	7.4
(7) Asian-Pacific American-owned	1	$250	$806	0.2	2.1	-1.9	9.1
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	0.5	-0.5	0.0
(9) Hispanic American-owned	5	$6,263	$17,686	4.1	7.7	-3.6	53.6
(10) Native American-owned	0	$0	$0	0.0	1.1	-1.1	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	2	$1,946	$4,521	1.1			
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	2	$1,946	$4,521	1.1			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	1	$250	$806	0.2			
(17) Asian-Pacific American-owned DBE	1	$250	$806	0.2			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	1	$1,697	$3,716	0.9			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-114.
Agency: Caltrans and Local Assistance
Funding: State
Type: Construction
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Contracts under $10M

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	857	$597,221	$920,177				
(2) MBE/WBE	135		$97,452	10.6	19.1	-8.5	55.5
(3) WBE	14		$18,923		5.8	-3.8	35.3
(4) MBE	121	$77,687	$78,529		13.3	-4.7	64.4
(5) African American-owned	11	$11,137 $2,667	$2,965	2.1 0.3	1.7	-1.4	19.0
(6) Total Asian American-owned	19	$66,549 $6,958	$8,356	8.5 0.9	2.1	-1.2	42.9
(7) Asian-Pacific American-owned	8	$3,928	$4,987	0.5	1.8	-1.3	29.3
(8) Subcontinent Asian American-owned	11	$3,030	$3,370	0.4	0.3	0.1	137.1
(9) Hispanic American-owned	71		$58,966		8.0	-1.6	80.0
(10) Native American-owned	19	$7,412	$8,242	0.9	1.4	-0.6	61.9
(11) Unknown MBE	1	$41,604 $7,909		6.4			
(12) DBE-certified	84		$43,023				
(13) Women-owned DBE	4	$1,995	$2,041	0.2			
(14) Minority-owned DBE	79	$40,448	$40,982	4.7			
(14) African American-owned DBE	6	$1,865	$1,907	0.2			
(16) Total Asian American-owned DBE	16	$37,486 $4,414	$5,084	4.5 0.6			
(17) Asian-Pacific American-owned DBE	6	$1,984	$2,598	0.3			
(18) Subcontinent Asian American-owned DBE	10	$2,430	$2,486	0.3			
(19) Hispanic American-owned DBE	39	$23,911	$26,526	2.9			
(20) Native American-owned DBE	18	$7,296	$7,464	0.8			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	1	$966					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-115.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: 2002-Apr 2006
Role: Prime Contractors
Region: California

Contracts under $10M

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	734	$1,133,427	$2,240,593				
(2) MBE/WBE	76		$136,946		18.3	-12.2	33.5
(3) WBE	14		$50,339		5.0	-2.8	44.6
(4) MBE	62	$64,772	$86,608	6.1	13.2	-9.4	29.2
(5) African American-owned	1	$17,175 $258	$258	2.2 0.0	1.6	-1.6	0.7
(6) Total Asian American-owned	9	$47,597 $5,257	$20,046	3.9 0.9	4.0	-3.1	22.2
(7) Asian-Pacific American-owned	4	$3,563	$4,493	0.2	3.9	-3.7	5.1
(8) Subcontinent Asian American-owned	5	$1,694	$15,553	0.7	0.1	0.6	951.6
(9) Hispanic American-owned	46		$48,112		6.5	-4.3	33.1
(10) Native American-owned	6	$2,580	$18,192	0.8	1.1	-0.3	74.3
(11) Unknown MBE	0	$39,502 $0		2.1			
(12) DBE-certified	49		$66,014				
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	47	$40,863	$66,014	2.9			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	7	$37,884 $4,061	$5,226	2.9 0.2			
(17) Asian-Pacific American-owned DBE	4	$3,563	$4,705	0.2			
(18) Subcontinent Asian American-owned DBE	3	$498	$521	0.0			
(19) Hispanic American-owned DBE	34	$31,244	$41,737	1.9			
(20) Native American-owned DBE	6	$2,580	$19,052	0.9			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	2	$2,978					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-116.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Construction
Time Period: May-Dec 2006
Role: Prime Contractors
Region: California

Contracts under $10M

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	33	$53,863	$68,448				
(2) MBE/WBE	5		$10,590	15.5	13.4	2.1	115.5
(3) WBE	2	$1,882	$2,559	3.7			103.1
(4) MBE	3	$7,459 $5,577	$8,031	11.7			120.1
(5) African American-owned	0	$0	$0	0.0 3.6	1.5 0.1	-1.5	0.0
(6) Total Asian American-owned	0	$0	$0	0.0 9.8	1.0 2.0	-1.0	0.0
(7) Asian-Pacific American-owned	0	$0	$0	0.0	0.9	-0.9	0.0
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	0.1	-0.1	0.0
(9) Hispanic American-owned	3	$5,577	$8,031	11.7			180.5
(10) Native American-owned	0	$0	$0	0.0	0.8	-0.8	0.0
(11) Unknown MBE	0	$0		6.5	5.2		
(12) DBE-certified	2	$498	$717	1.0			
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	2	$498	$717	1.0			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	0	$0	$0	0.0			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	2	$498	$717	1.0			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-117.
Agency: Caltrans
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Contracts under $500K

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	41	$6,327	$11,877				
(2) MBE/WBE	10		$1,056	8.9	32.8	-23.9	27.1
(3) WBE	2		$94	0.8	11.8	-11.0	6.7
(4) MBE	8	$862	$962	8.1	21.0	-12.8	38.7
(5) African American-owned	0	$0	$0	0.0	2.0	-2.0	0.0
(6) Total Asian American-owned	5	$92 $771 $460	$564	4.7	10.2	-5.5	46.4
(7) Asian-Pacific American-owned	4	$437	$542	4.6	6.7	-2.1	68.0
(8) Subcontinent Asian American-owned	1	$22	$22	0.2	3.5	-3.3	5.3
(9) Hispanic American-owned	3	$311	$398	3.4	6.4	-3.1	52.3
(10) Native American-owned	0	$0	$0	0.0	2.3	-2.3	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	6	$272	$352	3.0			
(13) Women-owned DBE	2	$92	$94	0.8			
(14) Minority-owned DBE	4	$180	$258	2.2			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	2	$79	$149	1.3			
(17) Asian-Pacific American-owned DBE	2	$79	$149	1.3			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	2	$101	$108	0.9			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-118.
Agency: Local Agency
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Contracts under $500K

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	16	$1,289	$27,447				
(2) MBE/WBE	2		$197	0.7	30.1	-29.4	2.4
(3) WBE	1		$165	0.6	8.8	-8.2	6.8
(4) MBE	1	$120	$32	0.1	21.4	-21.2	0.5
(5) African American-owned	0	$115 $0	$0	0.0	2.7	-2.7	0.0
(6) Total Asian American-owned	1	$5	$32	0.1	12.2	-12.1	1.0
(7) Asian-Pacific American-owned	1	$5 $5	$32	0.1	8.4	-8.3	1.4
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	3.7	-3.7	0.0
(9) Hispanic American-owned	0	$0	$0	0.0	5.5	-5.5	0.0
(10) Native American-owned	0	$0	$0	0.0	1.0	-1.0	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	0	$0	$0	0.0			
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	0	$0	$0	0.0			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	0	$0	$0	0.0			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	0	$0	$0	0.0			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-119.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Contracts under $500K

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	57	$7,616	$39,324				
(2) MBE/WBE	12		$1,253	3.2	30.9	-27.8	10.3
(3) WBE	3		$259	0.7	9.7	-9.0	6.8
(4) MBE	9	$983	$994	2.5	21.2	-18.7	11.9
(5) African American-owned	0	$0	$0	0.0	2.5	-2.5	0.0
(6) Total Asian American-owned	6	$207 $776 $465	$596	1.5	11.6	-10.1	13.1
(7) Asian-Pacific American-owned	5	$442	$574	1.5	7.9	-6.5	18.4
(8) Subcontinent Asian American-owned	1	$22	$22	0.1	3.7	-3.6	1.5
(9) Hispanic American-owned	3	$311	$398	1.0	5.8	-4.7	17.6
(10) Native American-owned	0	$0	$0	0.0	1.4	-1.4	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	6	$272	$352	0.9			
(13) Women-owned DBE	2	$92	$94	0.2			
(14) Minority-owned DBE	4	$180	$258	0.7			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	2	$79	$149	0.4			
(17) Asian-Pacific American-owned DBE	2	$79	$149	0.4			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	2	$101	$108	0.3			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-120.
Agency: Caltrans
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Contracts under $500K

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	6	$767	$1,024				
(2) MBE/WBE	0		$0	0.0	38.3	-38.3	0.0
(3) WBE	0		$0	0.0	13.8	-13.8	0.0
(4) MBE	0		$0	0.0	24.5	-24.5	0.0
(5) African American-owned	0	$0 $0	$0	0.0	6.9	-6.9	0.0
(6) Total Asian American-owned	0	$0 $0	$0	0.0	6.4	-6.4	0.0
(7) Asian-Pacific American-owned	0	$0 $0	$0	0.0	5.2	-5.2	0.0
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	1.1	-1.1	0.0
(9) Hispanic American-owned	0	$0	$0	0.0	11.0	-11.0	0.0
(10) Native American-owned	0	$0	$0	0.0	0.2	-0.2	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	0	$0	$0	0.0			
(13) Women-owned DBE	0	$0	$0	0.0			
(14) Minority-owned DBE	0	$0	$0	0.0			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	0	$0	$0	0.0			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	0	$0	$0	0.0			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-121.
Agency: Local Agency
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Contracts under $500K

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	19	$3,614	$31,920				
(2) MBE/WBE	1		$926	2.9	31.2	-28.3	9.3
(3) WBE	1		$926	2.9	13.7	-10.8	21.2
(4) MBE	0	$287	$0	0.0	17.5	-17.5	0.0
(5) African American-owned	0	$287 $0	$0	0.0	1.9	-1.9	0.0
(6) Total Asian American-owned	0	$0	$0	0.0	7.3	-7.3	0.0
(7) Asian-Pacific American-owned	0	$0 $0	$0	0.0	5.1	-5.1	0.0
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	2.2	-2.2	0.0
(9) Hispanic American-owned	0	$0	$0	0.0	7.5	-7.5	0.0
(10) Native American-owned	0	$0	$0	0.0	0.8	-0.8	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	1	$287	$926	2.9			
(13) Women-owned DBE	1	$287	$926	2.9			
(14) Minority-owned DBE	0	$0	$0	0.0			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	0	$0	$0	0.0			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	0	$0	$0	0.0			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-122.
Agency: Caltrans and Local Assistance
Funding: State
Type: Engineering
Time Period: 2002-2006
Role: Prime Contractors
Region: California

Contracts under $500K

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	25	$4,382	$32,943				
(2) MBE/WBE	1		$926	2.8	31.4	-28.6	8.9
(3) WBE	1		$926	2.8	13.7	-10.8	20.6
(4) MBE	0	$287	$0	0.0	17.7	-17.7	0.0
(5) African American-owned	0	$287 $0	$0	0.0	2.1	-2.1	0.0
(6) Total Asian American-owned	0	$0	$0	0.0	7.3	-7.3	0.0
(7) Asian-Pacific American-owned	0	$0 $0	$0	0.0	5.1	-5.1	0.0
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	2.2	-2.2	0.0
(9) Hispanic American-owned	0	$0	$0	0.0	7.6	-7.6	0.0
(10) Native American-owned	0	$0	$0	0.0	0.8	-0.8	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	1	$287	$926	2.8			
(13) Women-owned DBE	1	$287	$926	2.8			
(14) Minority-owned DBE	0	$0	$0	0.0			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	0	$0	$0	0.0			
(17) Asian-Pacific American-owned DBE	0	$0	$0	0.0			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	0	$0	$0	0.0			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-123.
Agency: Caltrans and Local Assistance
Funding: Federal
Type: Engineering
Time Period: 2002-Apr 2006
Role: Primes
Region: California

Contracts under $500K

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	54	$7,466	$32,185				
(2) MBE/WBE	11		$1,231	3.8	30.5	-26.7	12.5
(3) WBE	3		$259	0.8	10.0	-9.2	8.1
(4) MBE	8	$961	$972	3.0	20.6	-17.5	14.7
(5) African American-owned	0	$207 $0	$0	0.0	2.3	-2.3	0.0
(6) Total Asian American-owned	5	$754 $442	$574	1.8	10.7	-8.9	16.7
(7) Asian-Pacific American-owned	5	$442	$574	1.8	7.2	-5.5	24.6
(8) Subcontinent Asian American-owned	0	$0	$0	0.0	3.4	-3.4	0.0
(9) Hispanic American-owned	3	$311	$398	1.2	6.1	-4.9	20.2
(10) Native American-owned	0	$0	$0	0.0	1.4	-1.4	0.0
(11) Unknown MBE	0	$0					
(12) DBE-certified	6	$272	$352	1.1			
(13) Women-owned DBE	2	$92	$94	0.3			
(14) Minority-owned DBE	4	$180	$258	0.8			
(14) African American-owned DBE	0	$0	$0	0.0			
(16) Total Asian American-owned DBE	2	$79	$149	0.5			
(17) Asian-Pacific American-owned DBE	2	$79	$149	0.5			
(18) Subcontinent Asian American-owned DBE	0	$0	$0	0.0			
(19) Hispanic American-owned DBE	2	$101	$108	0.3			
(20) Native American-owned DBE	0	$0	$0	0.0			
(21) White male-owned DBE	0	$0	$0	0.0			
(22) Unknown DBE-MBE	0	$0					
(23) Unknown DBE	0	$0					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

Figure E-124. MBE and WBE Revenue Cap
Agency: Caltrans, Local Assistance and SR 125
Funding: Federal
Type: Construction and Engineering
Time Period: 2002-Apr 2006
Role: Prime Contractors, Subcontractors and Suppliers
Region: California

Firm Type	(a) Number of contracts (subcontracts) in sample	(b) Dollars in sample (thousands)	(c) Estimated total dollars (thousands)	(d) Actual utilization (column c/c-1) %	(e) Utilization benchmark (availability) %	(f) Difference (column d-e) %	(g) Disparity index (d/e)x100
(1) All firms	6,673	$5,882,603	$8,216,123				
(2) MBE/WBE	2,780		$1,205,425	14.7	13.5	1.2	108.9
(3) WBE	731	$305,766	$398,715	4.9			134.5
(4) MBE	2,052	$831,414 $525,907	$806,969	9.8	9.9		99.5
(5) African American-owned	108		$47,382	0.6	3.6 2.2	1.2 -1.6	26.2
(6) Total Asian American-owned	434	$92,532	$170,462	2.1	2.1	0.0 0.0	97.7
(7) Asian-Pacific American-owned	232	$39,689	$98,160		1.7	-0.5	70.4
(8) Subcontinent Asian American-owned	187	$36,501	$69,397	0.8	0.4	0.4	199.0
(9) Hispanic American-owned	893	$54,641 $350,936	$538,700	1.2 6.6			133.6
(10) Native American-owned	212		$50,426	0.6	0.6	0.0	98.0
(11) Unknown MBE	405	$20,847			4.9	1.6	
(12) DBE-certified	2,184	$21,903 $508,010	$742,215	9.0			
(13) Women-owned DBE	441		$71,587				
(14) Minority-owned DBE	1,722	$440,012	$670,548	8.2			
(14) African American-owned DBE	99	$60,978 $34,249	$41,513	0.9 0.5			
(16) Total Asian American-owned DBE	338	$74,765	$127,278	1.5			
(17) Asian-Pacific American-owned DBE	202	$47,748	$83,914	1.0			
(18) Subcontinent Asian American-owned DBE	133	$26,995	$43,301	0.5			
(19) Hispanic American-owned DBE	702	$291,690	$451,413	5.5			
(20) Native American-owned DBE	205	$21,184	$50,081	0.6			
(21) White male-owned DBE	2	$78	$339	0.0			
(22) Unknown DBE-MBE	375	$17,864					
(23) Unknown DBE	22	$7,202					

Notes: Spreadsheet rounds numbers to nearest thousand dollars or tenth of one percent. WBE is white women-owned firms.

Source: BBC Research and Consulting Disparity Analysis.

APPENDIX F.
Quantitative Analysis of California Marketplace

As discussed in Appendix B (Legal Environment for Caltrans DBE Program), federal courts have held that Congress had ample evidence of discrimination in the transportation contracting industry in upholding the constitutionality of the Federal DBE Program (TEA-21), and the federal regulations implementing the program (49 CFR Part 26).

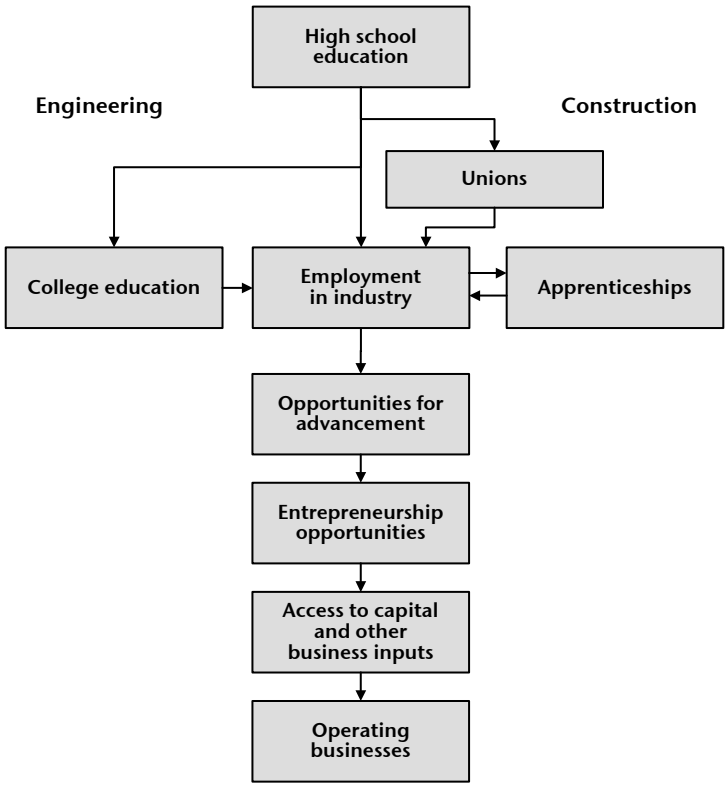
Entry into the Industry

The federal courts found Congress "spent decades compiling evidence of race discrimination in government highway contracting, of barriers to the formation of minority-owned construction businesses, and of barriers to entry."[1] Congress found that discrimination had impeded the formation of qualified minority business enterprises.

BBC examined whether some of these barriers to entry found for the nation as a whole also appear to occur in California. BBC separately studied barriers to entry for construction and for engineering. Entrance requirements and opportunities for advancement differ for these two branches of the overall transportation contracting industry. The first half of Appendix F examines potential barriers at several steps along the business entry chronology outlined in Figure F-1.

Figure F-1.
Model for studying the entry into industry

Source:
BBC Research and Consulting.



[1] Sherbrooke Turf, Inc., 345 F.3d at 970, (citing Adarand Constructors, Inc., 228 F.3d at 1167 – 76); Western States Paving Co. v. Washington State DOT, 407 F.3d 983 (9th Cir. 2005) at 992.

Education and Training

The paths to job opportunities, whether union programs to learn a trade or four-year college degrees in engineering, are important to understanding whether barriers affect employment opportunities for minorities and women that eventually affect the relative number of minority and female business owners.[2]

Construction. Construction industry employees in California typically have a high school degree with little or no college education. Based on the 2000 Census of Population, 28 percent of workers in construction were just high school graduates and 32 percent had not finished high school. Only 10 percent of people working in construction had a four-year college degree. Formal education beyond high school is not a prerequisite for most construction industry jobs.

Training is largely on-the-job and through trade schools and apprenticeship programs. Entry level jobs for workers out of high school are often laborers, helpers or apprentices. More skilled positions may require additional training through a technical or trade school or through an apprenticeship or other employer-provided training program. Apprenticeship programs can be developed by employers, trade associations, trade unions and other groups. Workers can enter apprenticeship programs from high school or a trade school. Apprenticeships have traditionally been three- to five-year programs that combine on-the-job training with classroom instruction.[3]

In the California workforce, African Americans and Hispanic Americans comprise a relatively large share of workers with just a high school education. In 2000, only 21 percent of African American workers 25 and older in California had a college degree, much lower than the 38 percent of non-Hispanic white workers in this age group. About 9 percent of Hispanic American workers and 19 percent of Native American workers in California had college degrees.

From these data, educational attainment does not appear to be a barrier for entry of minorities in the construction industry. Based on education requirements of entry level jobs and the limited education beyond high school for many African Americans, Hispanic Americans and Native Americans in California, one would expect a relatively high representation of these minority groups in the California construction industry.

However, given high educational levels of Asian-Pacific Americans and Subcontinent Asian Americans (among workers 25 and older, 45 percent and 67 percent of these groups have college degrees, respectively), representation of these groups in construction might be low relative to non-Hispanic whites.

The percentage of women working in California with just a high school diploma is similar to that of men based on 2000 Census of Population data.

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[2] Feagin, Joe R. and Nikitah Imani. 1994. Racial Barriers to African American Entrepreneurship: An Exploratory Study." *Social Problems*. 41 (4): 562-584.

[3] Bureau of Labor Statistics, U.S. Department of Labor. 2006-07. "Construction." C*areer Guide to Industries.* http://www.bls.gov/oco/cg/cgs003.htm (accessed February 15, 2007).

Engineering. More than half (58 percent) of the individuals working in the engineering industry have at least a four-year college degree. When only examining people who work as engineers, this percentage increases to 82 percent.[4]

The level of education needed to become an engineer is a barrier for African Americans and Hispanic Americans. Very few Hispanic Americans and relatively few African Americans and Native Americans working in the state had a degree from a four-year college in 2000.

Figure F-2 examines the percentage of workers 25 and older who have at least a four-year degree, across all industries. About 39 percent of non-Hispanic whites working in California had at least a four-year college degree in 2000. Relatively fewer Hispanic Americans, African Americans and Native Americans working in the state had college degrees. Relatively more Asian-Pacific Americans and Subcontinent Asian Americans had college degrees than non-Hispanic whites. About as many women as men, have college degrees in California.

Figure F-2.
Percentage of all workers 25 and older with at least a four-year degree in California and the U.S., 2000

California	Percentage of workers		United States	Percentage of workers	
Race/ethnicity			**Race/ethnicity**		
African American	20.9 %	**	African American	17.2 %	**
Asian-Pacific American	44.7	**	Asian-Pacific American	43.5	**
Subcontinent Asian American	67.2	**	Subcontinent Asian American	66.8	**
Hispanic American	9.1	**	Hispanic American	12.1	**
Native American	19.1	**	Native American	15.9	**
Other minority group	32.7	**	Other minority group	29.0	**
All minority groups	21.1	**	All minority groups	20.0	**
Non-Hispanic white	38.5		Non-Hispanic white	31.0	
Gender			**Gender**		
Female	29.8	**	Female	27.6	**
Male	30.6		Male	28.4	

Note: ** Denotes that the difference in proportions between the minority and non-Hispanic white groups (or female and male gender groups) is statistically significant at the 95% confidence level.

Source: BBC Research and Consulting from 2000 U.S. Census 5% Public Use Micro-sample data. The raw data extract was obtained through the IPUMS program of the MN Population Center: http://usa.ipums.org/usa/.

Additional indices of high school educational attainment. Because of the importance of college admission as a step in entering the engineering industry, the study team examined additional information on the educational achievement of minority high school students in California. The California Legislative Black Caucus published a report in early 2007 that included indices of high school achievement for African Americans, Asian Americans, Hispanic Americans and non-Hispanic whites. The study team translated the reported statistics into indices where 100 is the value for non-Hispanic white students. A figure lower than 100 indicates a lower rate for minority students.

[4] BBC Research and Consulting from 2000 U.S. Census 5% Public Use Micro-sample data. The raw data extract was obtained through the IPUMS program of the MN Population Center: http://usa.ipums.org/usa/.

As shown in Figure F-3, high school achievement indices ranged from 52 to 88 for African American students and from 59 to 88 for Hispanic American students. For example, only 25.2 percent of African American students had completed necessary courses for admission to a University of California or California State University school in 2004-2005. This was far below the rate for non-Hispanic white students (40.9 percent). The study team created an "index" for African American student achievement for completion of necessary courses by dividing 25.2 percent into 40.9 percent, yielding "62." Hispanic American students had an achievement index of 59 when compared with non-Hispanic white students completing courses for U.C./C.S.U. entrance.

Other notable indices for African Americans included:

- Passing the high school exit exam for English at a rate roughly one-half that of non-Hispanic white students;
- Passing the high school exit exam for math at less than two-thirds the rate of non-Hispanic white students; and
- Having a high school dropout rate more than twice that of non-Hispanic white students.

The achievement index with the least disparity between African Americans and whites was reading scores from the standardized achievement test administered to students in the 11th grade.

Hispanic American students, on average, exhibited similar disparities in achievement as found for African American students. Hispanic American students were closer to non-Hispanic white students in the rate of passing the high school exit exam for math. High school dropout rates were lower for Hispanic Americans than for African Americans, but still double that of non-Hispanic whites. Overall, the California Legislative Black Caucus report showed educational outcomes for Asian American students to be on par with non-Hispanic whites.

It appears that disparities in educational achievement in high school or in prior grades are important in explaining the relatively low number of African Americans and Hispanic Americans that have college degrees in California. There are many studies throughout the nation that consider whether the causes of the disparities in educational outcomes for African American and Hispanic American high school students are affected by discrimination; these are not reviewed here.

Figure F-3.
Indices of high school achievement for African Americans, Asian Americans, Hispanic Americans and Non-Hispanic whites in California, 2004-2005 (white=100)

	African American	Asian American	Hispanic American	Non-Hispanic white
Completed courses for U.C./C.S.U. entrance 2004-2005	62	144	59	100
CAT/6 Reading Scores (11th grade)	88	101	88	100
High school exit exam passing rate: English	52	108	64	100
High school exit exam passing rate: Math	62	86	62	100
SAT average score	79	98	83	100
High school dropouts: 1 year rate	275	70	200	100
High school dropouts: 4 year rate	276	70	210	100

Note: Data for completed courses for U.C./C.S.U. entrance were for 2004-2005. Dates not provided in source for other educational statistics.
Source: BBC Research & Consulting from California Legislative Black Caucus. 2007. The State of Black California, Full Report, Sacramento.

Additional factors affecting college engineering programs in California. Historically, college engineering programs in the United States were slow to open doors to minorities such as African Americans.[5] Today, California stands out as having low percentages of African American engineering students. Out of the top 26 engineering schools in 2002, four are University of California campuses (UC Berkeley, UC Los Angeles, UC Santa Barbara, and UC San Diego). A recent study identified these schools for the lowest percentages of African American engineering students among the top 26:[6]

- In fall 2002, the University of California-Berkeley had 65 African American students among 4,941 full-time engineering students (1.4 percent of the engineering students), similar to the absolute number and relative share of engineering students at UCLA.
- There were 23 African Americans among 2,370 total engineering students at UC-Santa Barbara
- UC-San Diego had no African Americans among its 5,264 engineering students in fall 2002.

Because the enrollment statistics for engineering students were for 2002, most of these students enrolled in college after Proposition 209 had gone into effect. Many scholars blame Proposition 209 for the relatively low representation of African American and Hispanic American students at more selective colleges in California.[7,8] Proposition 209 changed the ability of California's public colleges to give preferential treatment to minorities and women in college admissions and financial aid unless part of a federal program. This amendment to the California constitution was passed by voters in 1996 and went into effect in 1998.

To understand the broader patterns of enrollment by race and ethnicity in the four University of California schools with the highest-rated engineering programs, the study team examined African American, Hispanic American and Native American enrollment as freshmen in 1995 and in 2003. As shown in Figure F-4 on the following page:

- Enrollment of African American students was cut by half for UC-Berkeley and UCLA between 1995 and 2003. There was little overall change for UC-Santa Barbara and UC-San Diego.
- Declines in enrollment of Hispanic Americans also occurred at UC-Berkeley and UCLA. Enrollment of Hispanic Americans increased at UC-Santa Barbara and UC-San Diego.
- Enrollment of Native Americans dropped markedly at each of the four University of California campuses.

Total enrollment at each campus grew over this period, with non-Hispanic white and Asian-Pacific students accounting for most of the increases. The enrollment declines for African American and Hispanic American students between 1995 and 2003 were because of fewer offers of admission from these schools; applications from African American and Hispanic American students actually increased over this period.

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[5] Unknown Author. 2003. "Blacks Strive to Build a Bridgehead in Academic Engineering." *The Journal of Blacks in Higher Education*. 41 (Autumn): 98-108, 98.

[6] Unknown Author. 2003. "Blacks Strive to Build a Bridgehead."

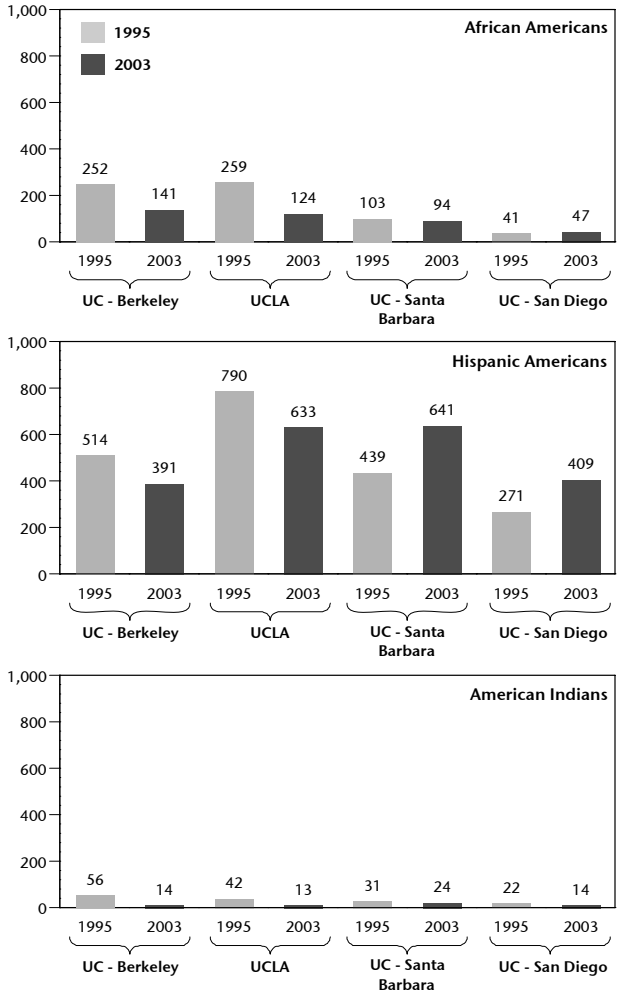
[7] Contreras, Frances. 2003. "The Reconstruction of Merit Post-Proposition 209." *Educational Policy*. 19 (2): 371-395.

[8] Karabel, Jerome. 1999. "The Rise and Fall of Affirmative Action at the University of California." *The Journal of Blacks in Higher Education*. 25 (Autumn): 109-112.

Figure F-4.
Enrollment of resident California freshman at selected University of California campuses

Source:

UC Office of the President, Student Academic Services, IA&SA, REG004/006 and campus reports, Jan 04 f03/flowfrc_0395.



Employment

With educational opportunities and attainment for minorities and women as context, the study team examined employment in construction and engineering in California.

Construction. Based on 2000 Census of Population data, nearly one-half of people working in the California construction industry in 2000 were minority. Of the people working in construction:

- 37 percent were Hispanic Americans;
- 4 percent were African Americans;
- 4 percent were Asian-Pacific Americans;
- 1.5 percent were Native Americans; and
- 0.2 percent were Subcontinent Asian Americans.

Representation of Hispanic Americans in the construction industry is considerably higher than for all industries as a whole (37 percent in construction and 29 percent in all industries in California). U.S. Census of Population data for 2000 showed that 16 percent of people working in construction in California were Hispanic Americans, about the same as for all industries in the state in that year.

African Americans and Asian-Pacific Americans working in California are relatively less likely to work in construction:

- Asian-Pacific Americans were 4.0 percent of the construction workforce and 11.2 percent of all workers in California in 2000 (a statistically significant difference). The fact that Asian-Pacific Americans are more likely to go to college than other groups may explain part of this difference.
- African Americans were 4.3 percent of the construction workforce and 6.5 percent of all workers in California (a statistically significant difference). Average educational attainment of African Americans is consistent with requirements for construction jobs, so education cannot explain the difference. A number of studies throughout the United States have argued that race discrimination by construction unions have held down employment of African Americans in construction trades.[9]
- Relative under-representation of African Americans and Asian-Pacific Americans was found in both 1980 and in 2000.[10] For example, 4.0 percent of construction industry workers were African American in 1980 compared with 4.3 percent in 2000.

Between 1980 and 2000, the share of construction workers in the United States who are women increased from 8.9 percent to 10.2 percent. In 2000, 9.9 percent of people working in the California construction industry were women, slightly less than in 1980. Figure F-5 on the following page compares the composition of the California construction industry with the total California workforce.

[9] Waldinger, Roger and Thomas Bailey. 1991. "The Continuing Significance of Race: Racial Conflict and Racial Discrimination in Construction." *Politics & Society*, 19(3).

[10] Note that Census definitions of race and ethnicity have changed over time, which affects comparability of statistics from one census year to the next. Appendix E (Analysis of U.S. Census of Population Data) discusses how BBC coded data concerning race and ethnicity for each decennial census.

Figure F-5.
Demographics of workers in construction and all industries in California and the US, 1980 and 2000

California	Construction 1980 (n = 39,196)	Construction 2000 (n = 60,113)	All industries 1980 (n = 679,838)	All industries 2000 (n = 966,244)
Race/ethnicity				
African American	4.0 % **	4.3 % **	6.6 %	6.5 %
Asian-Pacific American	1.9 **	4.0 **	5.0	11.2
Subcontinent Asian American	0.1 **	0.2 **	0.2	1.1
Hispanic American	15.6 **	36.9 **	16.7	29.0
Native American	1.3 **	1.5 **	0.9	1.2
Other minority group	0.2	0.9	0.2	0.9
Total minority	23.1 %	47.8 %	29.6 %	49.7 %
Non-Hispanic white	77.0 **	52.2 **	70.4	50.3
Total	100.0 %	100.0 %	100.0 %	100.0 %
Gender				
Female	10.3 % **	9.9 % **	45.9 %	46.5 %
Male	89.7 **	90.1 **	54.2	53.5
Total	100.0 %	100.0 %	100.0 %	100.0 %

United States	Construction 1980 (n = 391,361)	Construction 2000 (n = 579,867)	All industries 1980 (n = 6,338,776)	All industries 2000 (n = 8,295,671)
Race/ethnicity				
African American	7.7 % **	7.5 % **	9.9 %	11.4 %
Asian-Pacific American	0.6 **	1.3 **	1.4	3.4
Subcontinent Asian American	0.1 **	0.2 **	0.2	0.7
Hispanic American	5.7 **	15.8 **	5.6	11.3
Native American	0.9 **	1.6 **	0.6	1.2
Other minority group	0.1	0.4	0.1	0.4
Total minority	15.1 %	26.8 %	17.7 %	28.4 %
Non-Hispanic white	84.9 **	73.2 **	82.3	71.6
Total	100.0 %	100.0 %	100.0 %	100.0 %
Gender				
Female	8.9 % **	10.2 % **	46.0 %	47.9 %
Male	91.1 **	89.8 **	54.0	52.1
Total	100.0 %	100.0 %	100.0 %	100.0 %

Note: ** Denotes that the difference in proportions between the construction and all industry groups for the census year is statistically significant at the 95% confidence level.

Source: BBC Research and Consulting from 1980 and 2000 U.S. Census 5% Public Use Micro-sample data. The raw data extract was obtained through the IPUMS program of the MN Population Center: http://usa.ipums.org/usa/.

Importance of unions in entering the construction industry. Labor scholars characterize construction as a historically volatile industry sensitive to business cycles, making the presence of labor unions important for stability and job security within the industry.[11] The temporary nature of construction work results in uncertain job prospects, and high turnover of laborers presents a disincentive for construction firms to invest in training. Some scholars have claimed that constant turnover has lent itself to informal recruitment practices and nepotism, compelling laborers to tap social networks for training and work. They credit the importance of social networks with the high degree of ethnic segmentation in the construction industry.[12] Unable to integrate themselves into traditionally white social networks, African Americans faced long-standing historical barriers to entering the industry.[13]

Construction unions aim to provide a reliable source of labor for employers and preserve job opportunities for workers by formalizing the recruitment process, coordinating training and apprenticeships, enforcing standards of work and mitigating wage competition. The unionized sector of construction would seemingly be the best inroad for African American and other underrepresented groups into the industry. However, researchers have identified discrimination by trade unions that have historically prevented minorities from obtaining employment in skilled trades.[14]

- Unions have used admissions criteria that adversely affect minorities. Federal courts ruled in the 1970s that standardized testing requirements unfairly disadvantaged minority applicants who had less exposure to testing and that requirements that new union members have relatives in the union perpetuate the effects of past discrimination.[15] More recent disparity studies in California reveal that these practices persist: admissions testing requirements for union membership were still being used that adversely affected minorities,[16] and applicants who were relatives of union members were often waived from admissions requirements.[17]
- Of those minority individuals who are admitted to unions, a disproportionately low number are admitted into apprenticeship programs coordinated by unions. Apprenticeship programs are an important means of producing skilled construction laborers, and the reported exclusion of blacks from these programs has severely limited their access to skilled occupations in the construction industry.[18]

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[11] Applebaum, Herbert. 1999. *Construction Workers, U.S.A.* Westport: Greenwood Press.

[12] Waldinger, Roger and Thomas Bailey. 1991. "The Continuing Significance of Race: Racial Conflict and Racial Discrimination in Construction." *Politics & Society*, 19(3).

[13] Feagin, Joe R. and Nikitah Imani. 1994. "Racial Barriers to African American Entrepreneurship: An Exploratory Study." *Social Problems*. 41(4): 368-370.

[14] U.S. Department of Justice. 1996. Proposed Reforms to Affirmative Action in Federal Procurement. 61 FR 26042.

[15] Ibid. See United States v. Iron Workers Local 86 (1971), Sims v. Sheet Metal Workers International Association (1973), and United States v. International Association of Bridge, Structural and Ornamental Iron Workers (1971).

[16] National Economic Research Association, Inc. 1992. The Utilization of Minority and Woman-Owned Business Enterprises by Contra Costa County. 185-186.

[17] BPA Economics, Mason Tillman Associates, and Boasberg and Norton. 1990. *MBE-WBE Disparity Study of the City of San Jose*.

[18] Applebaum. 1999. Construction Workers, U.S.A.

> While formal training and apprenticeship programs exist within unions, most training of union members takes place informally through social networking. Nepotism characterizes the unionized sector of construction as it does the non-unionized sector, and this favors a white-dominated status quo.[19]
>
> Traditionally white unions have been successful in resisting policies designed to increase black participation in training programs. The political strength of unions in resisting affirmative action in construction has hindered the advancement of blacks in the industry.[20]
>
> Discriminatory practices in employee referral procedures, including apportioning work based on seniority, have precluded minority union members from having the same access to construction work as their white counterparts.[21]
>
> According to testimony from black union members, even when unions implement meritocratic mechanisms of apportioning employment to laborers, white workers are often allowed to circumvent procedures and receive preference for construction jobs.[22]

However, these historical observations may not be indicative of current dynamics in construction unions. For example, the 2006 Current Population Survey (CPS) provides current data on union membership indicating higher union membership for African Americans in construction.[23] The CPS asked participants, "Are you a member of a labor union or of an employee association similar to a union?" CPS data show union membership for African Americans in construction to be higher (17 percent) than non-Hispanic whites (14 percent) On the other hand, only 7 percent of Hispanic Americans are union members based on these national data.

It is unclear from past studies whether unions help or hinder equal opportunity in construction today, and whether effects in California are different from other parts of the country. In addition, Hispanic American representation in the national construction industry has seen great advances despite relatively few Hispanics being union members. There are no definitive results from previous research on the role of unions in disparities in African American or Asian-Pacific American employment in construction.

Engineering industry. The study team also examined race and ethnic composition of the engineering industry in California. Two-thirds of people working in the engineering industry in 2000 were non-Hispanic whites, which is greater than non-Hispanic whites' overall representation across all industries in the state. Asian-Pacific Americans and Subcontinent Asians were also more likely to be employed in the engineering industry than indicated from their representation among all workers in California. These patterns are found in 1980 as well (and for the United States for both 1980 and 2000). Native Americans comprise a small share of engineering industry employees, consistent with Native Americans' share of all California employment.

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[19] Ibid. 299. The high percentage of skilled workers reported having a father or relative in the same trade. However, the author suggests this may not be indicative of current trends.

[20] Waldinger and Bailey. 1991. "The Continuing Significance of Race: Racial Conflict and Racial Discrimination in Construction."

[21] U.S. Department of Justice. 1996. Proposed Reforms to Affirmative Action in Federal Procurement. 61 FR 26042. See *United Steelworkers of America v. Weber* (1979) and *Taylor v. United States Department of Labor* (1982).

[22] Feagin and Imani. 1994. "Racial Barriers to African American Entrepreneurship: An Exploratory Study."

[23] 2006 Current Population Survey (CPS), U.S. Census Bureau and Bureau of Labor Statistics.

Figure F-6.
Demographics of workers in the engineering and all industries in California and the U.S., 1980 and 2000

California	Engineering 1980 (n = 4,457)	Engineering 2000 (n = 9,248)	All industries 1980 (n = 679,838)	All industries 2000 (n = 966,244)
Race/ethnicity				
African American	2.3 % **	3.6 % **	6.6 %	6.5 %
Asian-Pacific American	7.3 **	14.5 **	5.0	11.2
Subcontinent Asian American	0.9 **	1.5 **	0.2	1.1
Hispanic American	7.0 **	11.5 **	16.7	29.0
Native American	0.5 **	1.1	0.9	1.2
Other minority group	0.2	1.0	0.2	0.9
Total minority	18.2 %	33.1 %	29.6 %	49.7 %
Non-Hispanic white	81.8 **	66.9	70.4	50.3
Total	100.0 %	100.0 %	100.0 %	100.0 %
Gender				
Female	25.0 % **	28.5 %	45.9 %	46.5 %
Male	75.0 **	71.5	54.2	53.5
Total	100.0 %	100.0 %	100.0 %	100.0 %

United States	Engineering 1980 (n = 391,361)	Engineering 2000 (n = 579,867)	All industries 1980 (n = 6,338,776)	All industries 2000 (n = 8,295,671)
Race/ethnicity				
African American	3.1 % **	4.3 % **	9.9 %	11.4 %
Asian-Pacific American	2.7 **	4.7 **	1.4	3.4
Subcontinent Asian American	1.0 **	1.3 **	0.2	0.7
Hispanic American	3.5 **	5.7 **	5.6	11.3
Native American	0.4 **	0.8 **	0.6	1.2
Other minority group	0.1	0.4	0.1	0.4
Total minority	10.9 %	17.2 %	17.7 %	28.4 %
Non-Hispanic white	89.2 **	82.8 **	82.3	71.6
Total	100.0 %	100.0 %	100.0 %	100.0 %
Gender				
Female	23.2 % **	27.1 % **	46.0 %	47.9 %
Male	76.8 **	72.9 **	54.0	52.1
Total	100.0 %	100.0 %	100.0 %	100.0 %

Note: ** Denotes that the difference in proportions between the construction and all industry groups for the census year is statistically significant at the 95% confidence level.

The engineering industry sector in 2000 is "architectural, engineering and related services," and in 1980 is "engineering, architectural and surveying services." Though closely related, the groups are not exactly comparable.

Source: BBC Research and Consulting from 1980 and 2000 U.S. Census 5% Public Use Micro-sample data. The raw data extract was obtained through the IPUMS program of the MN Population Center: http://usa.ipums.org/usa/.

As shown in Figure F-6 on the previous page, African Americans and Hispanic Americans had relatively low representation in the engineering industry:

- African Americans made up a relatively small share of engineering industry workers relative to African Americans' share of employment in other industries in 2000 (3.6 percent compared with 6.5 percent). This was also true in 1980.
- Hispanic Americans were 11.5 percent of engineering industry workers in 2000, less than one-half of Hispanics' representation in the overall California workforce (29.0 percent).

In 2000, women represented 28 percent of engineering industry workers, up from 25 percent in 1980.

Employment patterns seen for California's engineering industry are generally consistent with the nation as a whole.

The study team also examined the relative number of minorities and women among civil, environmental and mining and geological engineers in California in 2000. Except for Asian-Pacific Americans, the relative number of engineers by race and ethnicity was consistent with each group's representation among all Californians with college degrees. However, 16 percent of people with college degrees in California in 2000 were Asian-Pacific Americans, and Asian-Pacific Americans were 20 percent of engineers in California.

Finally, about 14 percent of engineers in California are women, far less than women's share of people with college degrees. Figure F-7 presents these results.

Figure F-7.
Demographics of engineers and workers 25 and older with a college degree in California and the U.S., 2000

California	Engineers (n = 2,482)		Workers 25+ with a college degree (n = 242,421)
Race/ethnicity			
African-American	3.6 %	**	4.5 %
Asian-Pacific American	19.7	**	16.6
Subcontinent Asian American	3.0		2.5
Hispanic American	8.0		8.0
Native American	0.8		0.7
Other minority group	0.8		0.9
Non-Hispanic white	64.1		66.8
Total	100.0 %		100.0 %
Gender			
Female	13.6 %	**	45.9 %
Male	86.4	**	54.2
Total	100.0 %		100.0 %

United States	Engineers (n = 16,342)		Workers 25+ with a college degree (n = 1,846,629)
Race/ethnicity			
African-American	3.9 %	**	6.8 %
Asian-Pacific American	6.3	**	5.3
Subcontinent Asian American	2.6	**	1.7
Hispanic	4.3		4.5
Native American	0.7		0.7
Other minority group	0.4		0.4
Non-Hispanic white	81.7	**	80.6
Total	100.0 %		100.0 %
Gender			
Female	11.8 %	**	47.1 %
Male	88.2	**	52.9
Total	100.0 %		100.0 %

Note: ** Denotes that the difference in proportions between engineers and workers 25+ with a college degree is statistically significant at the 95% confidence level.

Source: BBC Research and Consulting from 2000 U.S. Census 5% Public Use Micro-sample data. The raw data extract was obtained through the IPUMS program of the MN Population Center: http://usa.ipums.org/usa/.

Advancement in Construction

To research opportunities for advancement in the California transportation construction industry, the study team examined representation of minorities and women in a number of specific occupations related to transportation construction. Relevant construction trades include:

- Cement masons, concrete finishers, segmental pavers and terrazzo workers, who smooth and finish poured concrete surfaces and work with cement to create sidewalks, curbs, roadways or other surfaces;
- Paving, surfacing and tamping equipment operators, who operate equipment used for applying concrete, asphalt, or other materials to road beds, parking lots, or airport runways and taxiways, or equipment used for tamping gravel and dirt;
- Miscellaneous construction equipment operators, who operate motor graders, bulldozers, scrapers, compressors, pumps, derricks, shovels, tractors, or front-end loaders to excavate, move, and grade earth, erect structures, or pour concrete or other hard surface pavement;
- Electricians, who install, connect, test and maintain building electrical systems, which also can include lighting, climate control, security and communications;
- Structural and reinforcing iron and metal workers, who place and install iron or steel girders, columns and other structural members to form completed structures or frameworks of buildings, bridges and other structures; and
- Construction laborers, who perform a wide range of physically demanding tasks at building and highway construction sites, such as tunnel and shaft excavation, hazardous waste removal, environmental remediation and demolition.

The above definitions are from the U.S. Bureau of Labor Statistics.[24] The U.S. Bureau of Labor Statistics also describes other trades involved in construction, several of which apply directly to transportation construction:

- Truck drivers;
- Crane and tower operators; and
- Dredge, excavating and loading machine and dragline operators.

Finally, the U.S. Bureau of Labor Statistics analyzes first-line supervisors and managers of construction trades and extraction workers. Management personnel are the most likely of any construction occupation to require a college degree.

BBC compared the race/ethnic/gender composition of people working in low-skill occupations such as laborers with higher-skill construction trades and supervisory ranks.

[24] Bureau of Labor Statistics, U.S. Department of Labor. 2001. "Standard Occupational Classification Major Groups." http://www.bls.gov/soc/soc_majo.htm (accessed February 15, 2007).

Race and ethnic composition of construction trades. There are large differences in the racial and ethnic makeup of workers in different trades related to highway construction based on the 2000 U.S. Census of Population. Figure F-8 shows the proportion of occupations for people who work in construction in California for 2000. Overall, 48 percent of the construction workforce were minorities (36.9 percent Hispanic Americans and 10.9 percent other minorities). Minorities comprised a relatively large share of the California construction workforce for:

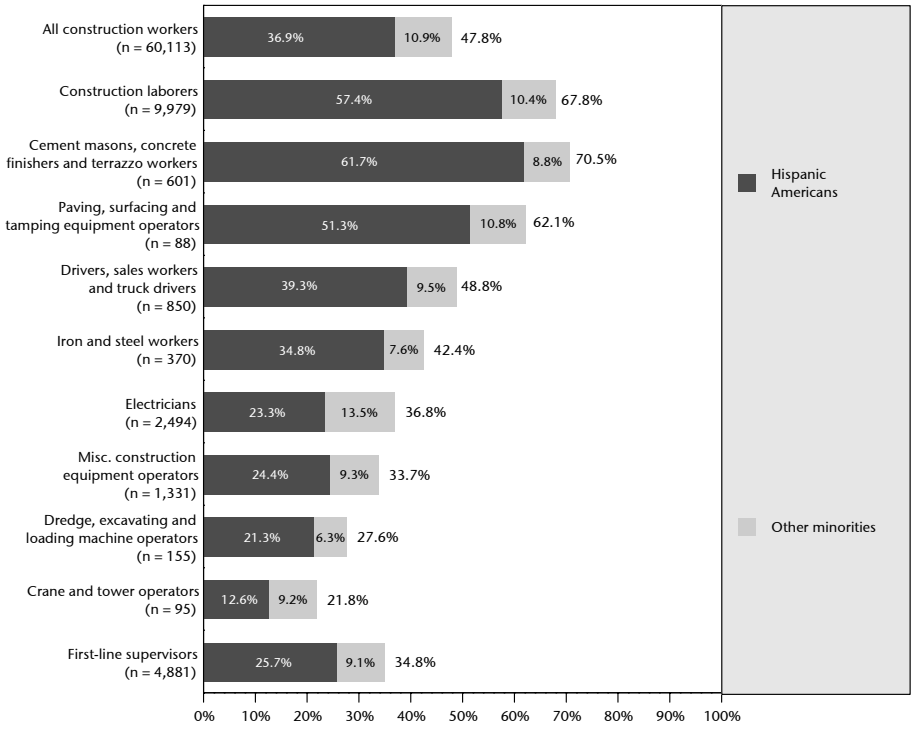
- Construction laborers (68 percent);
- Cement masons, concrete finishers and terrazzo workers (71 percent); and
- Paving, surfacing and tamping equipment operators (62 percent).

A number of occupations had relatively low representation of minorities:

- Crane and tower operators (22 percent);
- Dredge, excavating and loading machine operators (28 percent);
- Miscellaneous construction equipment operators, (34 percent);
- Electricians (37 percent); and
- Iron and steel workers (42 percent).

About 35 percent of first-line supervisors of construction workers were minorities, less than minorities' share of all occupations in construction. Figure F-8 examines these statistics.

Figure F-8.
Minorities as a percentage of construction workers in selected occupations in California, 2000



Source: BBC Research and Consulting from 2000 U.S. Census 5% Public Use Micro-sample data. The raw data extract was obtained through the IPUMS program of the MN Population Center: http://usa.ipums.org/usa/.

Most of the differences for minorities, overall, reflect differences in Hispanic Americans' representation in these occupations. There were some notable exceptions, however.

African Americans were a relatively large share of construction laborers (5.4 percent) and a relatively small share of first-line supervisors (3.4 percent). These are statistically significant differences from the overall representation of African Americans in the construction industry as a whole (4.3 percent). Even with the higher representation of African Americans in construction laborer jobs, the share of these jobs going to African Americans still falls short of African Americans' representation in the California workforce.

Asian-Pacific Americans were a relatively small share of construction laborers (2.9 percent), cement masons, concrete finishers and terrazzo workers (1.2 percent), truck drivers (2.0 percent), iron and steel workers (2.0 percent), and first-line supervisors (3.0 percent) compared with the share of all construction workers who were Asian-Pacific Americans (4.0 percent). Each difference noted is statistically significant.

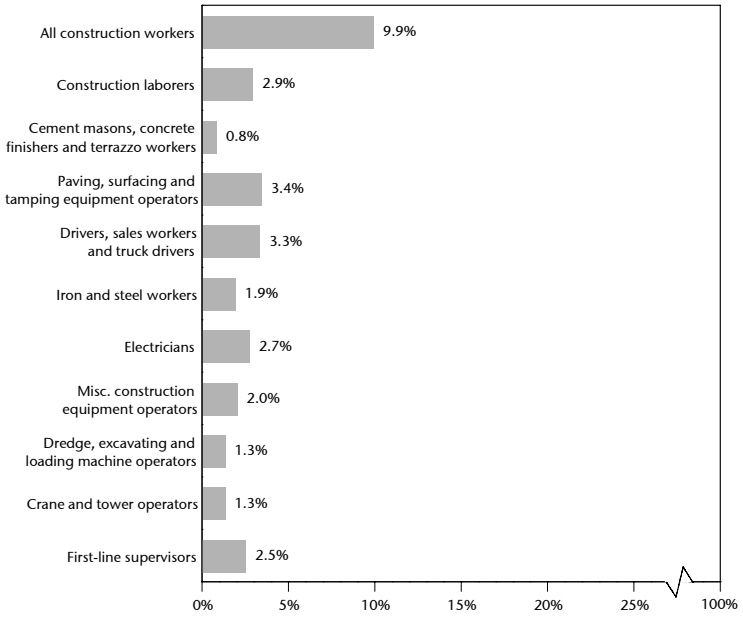
Women in construction trades. About 10 percent of workers in the California construction industry in 2000 were women. In occupations most closely related to the highway construction industry, however, few workers were women. Women also accounted for a slightly smaller share of construction workers in 2000 than in 1980. As shown in Figure F-9 on the following page:

- Among cement masons, concrete finishers and terrazzo workers, fewer than one in 100 workers were women.
- About 1 percent of dredge, excavating and loading machine operators and crane and tower operators were women.
- Two percent of miscellaneous construction equipment operators were women, about the same as women's representation among iron and steel workers.
- Three percent of construction laborers, paving, surfacing and tamping equipment operators, drivers and electricians were women.
- Women were 2.5 percent of first-line supervisors.

Figure F-9.
Women as a percentage of construction workers in selected occupations in California, 2000

Source:

BBC Research and Consulting from 2000 U.S. Census 5% Public Use Micro-sample data. The raw data extract was obtained through the IPUMS program of the MN Population Center: http://usa.ipums.org/usa/.



Relative share of minorities and women in construction who are managers. Figures F-8 and F-9 showed the representation of minorities and women among first-line supervisor positions in the California construction industry. The study team also reviewed employment of minorities and women as managers, which is a higher position than first-line supervisor. Construction managers, on average, have more education than first-line supervisors (27 percent have at least a bachelor's degree in California compared with 10 percent of first-line supervisors). Figure F-10 shows the proportion of workers in the construction industry in each group that reported a "manager" occupation.

In 2000, 10 percent of non-Hispanic whites working in the California construction industry were managers. A similar percentage of Subcontinent Asian Americans were managers. Nearly 9 percent of Asian-Pacific Americans were managers (not a substantial difference from the rate for non-Hispanic whites).

In contrast, only 2 percent of Hispanic Americans and 4 percent of African Americans working in construction in 2000 were managers (statistically significant differences from non-Hispanic whites). About 8 percent of Native Americans working in construction were managers.

Fewer women than men working in construction were managers (4.7 percent versus 7.1 percent).

Except for the large number of Native American managers in California, the results described above are consistent with the relative share of construction workers who are managers across the United States.

Figure F-10.
Percentage of construction workers who work as a manager in California and the U.S., 1980 and 2000

California	1980	2000	United States	1980	2000
Race/ethnicity			**Race/ethnicity**		
African American	1.3 % **	4.1 % **	African American	1.4 % **	2.9 % **
Asian-Pacific American	4.0 *	8.9 **	Asian-Pacific American	4.2	7.0
Subcontinent Asian American	3.6	9.9	Subcontinent Asian American	5.1	10.3 **
Hispanic American	2.0 **	2.3 **	Hispanic American	1.9 **	2.4 **
Native American	4.6	7.7 **	Native American	2.2 **	4.2 **
Other minority group	6.3	8.3	Other minority group	4.7	5.8 **
Non-Hispanic white	5.6	10.2	Non-Hispanic white	4.6	7.1
Gender			**Gender**		
Female	6.6 **	4.7 **	Female	5.1 **	3.9 **
Male	4.6	7.1	Male	4.1	6.2
All	**4.8 %**	**6.9 %**	**All**	**4.2 %**	**6.0 %**

Note: *, ** Denote that the difference in proportions between the minority and non-Hispanic white groups (or female and male gender groups) is statistically significant at the 90% and 95% confidence levels, respectively.

Source: BBC Research and Consulting from 1980 and 2000 U.S. Census 5% Public Use Micro-sample data. The raw data extract was obtained through the IPUMS program of the MN Population Center: http://usa.ipums.org/usa/.

Business Ownership

Many studies have explored differences in rates of business ownership between minorities and non-minorities in the United States. Though self-employment rates have increased for minorities and women, studies by Waldinger and Aldrich (1990), Fairlie and Meyer (1996), and Fairlie and Robb (2006) indicate that different opportunities for entrepreneurship exist based on gender, ethnicity and race.[25] One study found that the explanatory power of race and ethnicity in self-employment is almost greater in the presence of other factors that also affect self-employment.[26]

Disparities in the rates of business ownership have been one type of evidence used by courts in finding the Federal DBE Program to be valid. Any disparities in business ownership rates may also be important when considering step 2 adjustments in the annual DBE goal. For example, research developed for the Illinois Department of Transportation considered disparities in business ownership rates as a factor in adjusting the base figure for the IDOT annual DBE goal.[27]

[25] See Waldinger, Roger and Howard E. Aldrich. 1990. *Ethnicity and Entrepreneurship.* Annual Review of Sociology. 111-135.; Fairlie, Robert W. and Bruce D. Meyer. 1996. *Ethnic and Racial Self-Employment Differences and Possible Explanations.* The Journal of Human Resources, Volume 31, Issue 4, 757-793.; Fairlie, Robert W. and Alicia M. Robb. 2006. *Why are Black-Owned Businesses Less Successful than White-Owned Businesses? The Role of Families, Inheritances, and Business Human Capital.* Forthcoming Journal of Labor Economics.; and Fairlie, Robert W. and Alicia M. Robb. 2006. *Race, Families and Business Success: A Comparison of African-American-, Asian-, and White-Owned Businesses.* Russell Sage Foundation.

[26] Fairlie, Robert W. and Bruce D. Meyer. 1996. *Ethnic and Racial Self-Employment Differences and Possible Explanations.* The Journal of Human Resources, Volume 31, Issue 4, 757-793.

[27] National Economic Research Associates, Inc. 2004. *Disadvantaged Business Enterprise Availability Study*. Prepared for the Illinois Department of Transportation.

California construction industry. The 5% Public Use Micro-sample Data from the U.S. Census of Population can be utilized to study rates of self-employment in California.

Business ownership rates in 2000. Figure F-11 on the following page shows the percentage of different groups working in the construction industry that were self-employed in 2000 and in 1980.

In 2000, 26 percent of non-Hispanic whites working in the construction industry in California were self-employed (in incorporated or unincorporated businesses), about the same as the rate for the United States for that year. The rate of business ownership among Asian-Pacific Americans working in the California construction industry was similar to non-Hispanic whites.

Rates of business ownership among other minority groups working in the construction industry were lower than non-Hispanic whites in 2000:

- African Americans and Hispanic Americans working in the California construction industry owned businesses at one-half the rate of non-Hispanic whites. These differences are statistically significant at the 95 percent confidence level.
- About 15 percent of Subcontinent Asian Americans, working in construction in California, owned their own businesses in 2000. This difference is statistically significant.
- The rate of self-employment for Native Americans working in the construction industry in California, 22 percent, is relatively close to the rate of self-employment for non-Hispanic whites.

In 2000, 15 percent of women working in the California construction industry were self-employed, substantially lower than the rate for men (21 percent). This difference is statistically significant.

In sum, there were statistically significant disparities in the rates of business ownership in 2000 among people working in construction in California for African Americans, Hispanic Americans, Subcontinent Asian Americans and Native Americans compared to non-Hispanic whites. For each of these groups except Native Americans, the differences in self-employment rates compared with non-Hispanic whites were substantial. Women working in construction in 2000 had substantially lower rates of business ownership than men did, and the difference is statistically significant. (Note that only 15 percent of people who owned construction businesses had at least a bachelor's degree.)

The patterns found for business ownership for these race/ethnic and gender groups in the California construction industry in 2000 are similar to those for construction in the United States as a whole. The only notable exception was business ownership rates for Asian-Pacific Americans, which were considerably higher in the California industry than the United States.

Figure F-11.
Percentage of self-employed workers in the construction industry in California and the U.S., 1980 and 2000

California	1980		2000		United States	1980		2000	
Race/ethnicity					**Race/ethnicity**				
African American	11.7 %	**	13.1 %	**	African American	9.0 %	**	15.7 %	**
Asian-Pacific American	14.9	**	25.6		Asian-Pacific American	11.2	**	21.4	**
Subcontinent Asian American	3.6		15.4	**	Subcontinent Asian American	5.9	**	19.6	**
Hispanic American	9.7	**	11.8	**	Hispanic American	10.5	**	12.6	**
Native American	13.9	**	21.6	**	Native American	9.5	**	19.0	**
Other minority group	22.2		25.4		Other minority group	14.8	*	23.7	
Non-Hispanic white	21.4		26.0		Non-Hispanic white	19.1		25.2	
Gender					**Gender**				
Female	10.0	**	14.6	**	Female	9.5	**	17.1	**
Male	20.0		20.7		Male	18.5		22.9	
All individuals	**18.9 %**		**20.1 %**		**All individuals**	**17.7 %**		**22.3 %**	

Note: *, ** Denote that the difference in proportions between the minority and non-Hispanic white groups (or female and male gender groups) is statistically significant at the 90% and 95% confidence levels, respectively.

Source: BBC Research and Consulting from 1980 and 2000 U.S. Census 5% Public Use Micro-sample data. The raw data extract was obtained through the IPUMS program of the MN Population Center: http://usa.ipums.org/usa/.

Changes in business ownership rates in California since 1980. In 1980, 21 percent of non-Hispanic whites working in the construction industry in California were self-employed. The rate of self-employment in this group increased from 21 percent to reach 26 percent in 2000. Increases were also found for:

- Asian-Pacific Americans, which showed a more dramatic increase in self-employment in construction since 1980 (15 percent in 1980 and 26 percent in 2000);
- Native Americans, which increased from 14 percent self-employment rate in 1980 to 22 percent in 2000); and
- Subcontinent Asian Americans, which may have increased from 4 percent in 1980 to 15 percent in 2000 (note that statistics for 1980 for Subcontinent Asian Americans are based on only 56 responses in the 1980 Census of Population).

This growth in rates of business ownership is not evident for African Americans and Hispanics:

- Although business ownership rates in construction increased since 1980 for African Americans for the nation as a whole, there was little change in the rate for African Americans working in the California construction industry.
- The rate of business ownership increased among Hispanic Americans working in construction in California by two percentage points, about the same as the United States.

The differences in business ownership rates between men and women working in construction in California narrowed between 1980 and 2000. Although the rate of self-employment increased by only one percentage point for men over this time frame, the rate for women increased by 5 percentage points (still remaining below the rate for men).

California engineering industry. The study team also compared self-employment rates among groups for the California engineering industry.

Business ownership rates in 2000. Among non-Hispanic whites working in the California engineering industry in 2000, 19 percent owned their own businesses. Except for Native Americans, minorities working in the industry in 2000 had substantially lower rates of self-employment:

- Only 10 percent of Hispanics working in the engineering industry in California were self-employed.
- Only 11 percent of Asian-Pacific Americans owned their own engineering businesses.
- About 12 percent of African Americans in the engineering industry owned businesses.
- About 14 percent of Subcontinent Asian Americans owned their own business (not a statistically significant difference due to relatively small sample size for Subcontinent Asians working in engineering in California).

There was little difference in rates of business ownership between Native Americans and non-Hispanic whites in 2000, as shown in Figure F-12. In California, men were about twice as likely as women to be self-employed in the engineering industry.

Except for Native Americans, each minority group had higher rates of business ownership in California than found for the nation. Non-Hispanic whites working in the engineering industry also had a higher rate of self-employment in California.

The study team also examined business ownership rates among civil, environmental and geological engineers in California. Results are not presented here due to relatively small sample sizes. In general, disparities in rates of business ownership mirrored those for the industry as a whole.

Changes in business ownership rates in California since 1980. Business ownership rates in the engineering industry increased since 1980 for African Americans, Native Americans and women.

Figure F-12.
Percentage of self-employed workers in the engineering industry in California and the U.S., 1980 and 2000

California	1980		2000		United States	1980		2000	
Race/ethnicity					**Race/ethnicity**				
African American	7.8 %	**	12.2 %	**	African American	5.0 %	**	6.4 %	**
Asian-Pacific American	11.1	**	10.7	**	Asian-Pacific American	8.2	**	8.7	**
Subcontinent Asian American	14.6		13.7		Subcontinent Asian American	6.0	**	6.2	**
Hispanic American	8.7	**	10.0	**	Hispanic American	8.7	**	9.5	**
Native American	9.5		20.3		Native American	9.5		11.6	*
Other minority group	10.0		23.0		Other minority group	7.1		11.8	
Non-Hispanic white	20.4		19.1		Non-Hispanic white	15.4		14.7	
Gender					**Gender**				
Female	6.5	**	9.7	**	Female	4.2	**	7.8	**
Male	22.4		19.3		Male	17.6		15.8	
All individuals	**18.4 %**		**16.6 %**		**All individuals**	**14.5 %**		**13.6 %**	

Note: *, ** Denote that the difference in proportions between the minority and non-Hispanic white groups (or female and male gender groups) is statistically significant at the 90% and 95% confidence levels, respectively.

Source: BBC Research and Consulting from 1980 and 2000 U.S. Census 5% Public Use Micro-sample data. The raw data extract was obtained through the IPUMS program of the MN Population Center: http://usa.ipums.org/usa/.

Potential causes of differences in business ownership rates. Researchers have examined whether there are disparities in business ownership rates after considering factors such as education and age. A number of studies have found that disparities in business ownership still exist in the presence of such factors:

- Several studies have found that access to financial capital is a strong determinant of business ownership. One consistent finding is the positive relationship between startup capital and business formation, expansion and survival.[28] One study found that housing appreciation measured at the MSA-level is a positive determinant of entry into self-employment.[29] However, unexplained differences still exist when controlling for these factors.[30]
- Education has positive effects on the probability of business ownership in most industries. However, findings from multiple studies indicate that minorities are still less likely to own a business than their non-minority counterparts with the same levels of education.[31]
- Intergenerational links contribute to the likelihood of self-employment. One study found that experience working for a self-employed family member increases the likelihood of self employment for minority groups.[32]
- Studies have found that time since immigration, or assimilation to American Society, are important determinants of self-employment. However, unexplained differences in minority-business ownership still exist when controlling for these factors.[33]

Appendix H reports findings from multivariate statistical models that explain business ownership in California's construction and engineering industries as a function of race and gender as well as neutral factors, such as age and education These analyses draw upon the methods and model specification used in past business ownership research and in previous court-approved disparity studies. The coefficients for this model are reported for construction firm owners in Figure H-2 and for engineering firm owners in Figure H-4.

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[28] See Lofstrom, Magnus and Chunbei Wang. 2006. *Hispanic Self-Employment: A Dynamic Analysis of Business Ownership.* Working paper, Forschungsinstitut zur Zukunft der Arbeit Institute for the Study of Labor.; and Fairlie, Robert W. and Alicia M. Robb. 2006. *Race, Families and Business Success: A Comparison of African-American-, Asian-, and White-Owned Businesses.* Russell Sage Foundation.

[29] Fairlie, Robert W. and Harry A. Krashinksy. 2006. Liquidity Constraints, Household Wealth and Entrepreneurship Revisited.

[30] Lofstrom, Magnus and Chunbei Wang. 2006. *Hispanic Self-Employment: A Dynamic Analysis of Business Ownership.* Working paper, Forschungsinstitut zur Zukunft der Arbeit Institute for the Study of Labor.

[31] See Fairlie, Robert W. and Bruce D. Meyer. 1996. *Ethnic and Racial Self-Employment Differences and Possible Explanations.* The Journal of Human Resources, Volume 31, Issue 4, 757-793; and Butler, John Sibley and Cedric Herring. 1991. *Ethnicity and Entrepreneurship in America: Toward an Explanation of Racial and Ethnic Group Variations in Self-Employment.* Sociological Perspectives. 79-94.

[32] See Fairlie, Robert W. and Alicia M. Robb. 2006. Race, Families and Business Success: A Comparison of African-American-, Asian-, and White-Owned Businesses. Russell Sage Foundation; and Fairlie, Robert W. and Alicia M. Robb. 2006. Why are Black-Owned Businesses Less Successful than White-Owned Businesses? The Role of Families, Inheritances, and Business Human Capital. Forthcoming Journal of Labor Economics.

[33] See Fairlie, Robert W. and Bruce D. Meyer. 1996. *Ethnic and Racial Self-Employment Differences and Possible Explanations.* The Journal of Human Resources, Volume 31, Issue 4, 757-793; and Butler, John Sibley and Cedric Herring. 1991. *Ethnicity and Entrepreneurship in America: Toward an Explanation of Racial and Ethnic Group Variations in Self-Employment.* Sociological Perspectives. 79-94.

Homeownership and Mortgage Lending

One of the factors researchers examine when studying business formation and success is access to capital. Discrimination in capital markets can prevent minorities and women from acquiring the capital necessary to start or expand a business.[34] BBC begins by studying homeownership and mortgage lending, as home equity is an important source of capital to start and expand businesses. The final portion of Section F examines access to business loans.

Homeownership. Wealth created through homeownership can be an important source of capital to start or expand a business. Any barriers to homeownership and home equity growth for minorities or women can affect business opportunities for these groups. Similarly, any barriers to accessing the equity in a home through home mortgages can also affect the capital available for new or expanding businesses. In sum:

- A home is a tangible asset that provides borrowing power;[35]
- Wealth that accrues from housing equity and tax savings from home ownership contribute to capital formation;[36]
- Mortgage loans have traditionally been the second largest loan type for small businesses behind lines of credit;[37] and
- Homeownership is associated with an estimated 30 percent reduction in predicted probability of loan denial for small businesses.[38]

Home equity as a source of business capital is especially important in California where past home price appreciation has caused home ownership to be a substantial portion of many households' wealth.[39] The study team first considered homeownership rates in California and home prices before turning to data on the home mortgage market.

Homeownership rates. Homeownership is the first step toward building home equity that can be tapped for other purposes. Many studies document past discrimination in the housing markets in the United States. For example, the United States has a history of restrictive real estate covenants and property laws affecting the ownership rights of minorities and women.[40] In the past, a woman's participation in home ownership was ancillary to that of her husband and parents.[41]

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[34] For an example, see: Coleman, Susan. Small Firm Sources of Debt Capital: A Comparison by Gender, Race and Ethnicity. University of Hartford.

[35] Nevin, Allen. 2006. "Homeownership in California: A CBIA Economic Treatise." *California Building Industry Association.* 2.

[36] Jackman, Mary R. and Robert W. Jackman 1980. "Racial Inequalities in Home Ownership." *Social Forces.* 58. 1221-1234.

[37] Berger, Allen N. and Gregory F. Udell. 1998. "The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle." *Journal of Banking and Finance.* 22.

[38] Cavalluzzo, Ken and John Wolken. 2005. "Small Business Loan Turndowns, Personal Wealth and Discrimination." *Journal of Business.* 78:2153-2178.

[39] Myers, Dowell and Xin Gao. 2004. "Trajectories of Homeownership in California, 1980 to 2000, and 2000 to 2030." *California Housing Futures research program.* Fannie Mae Foundation.

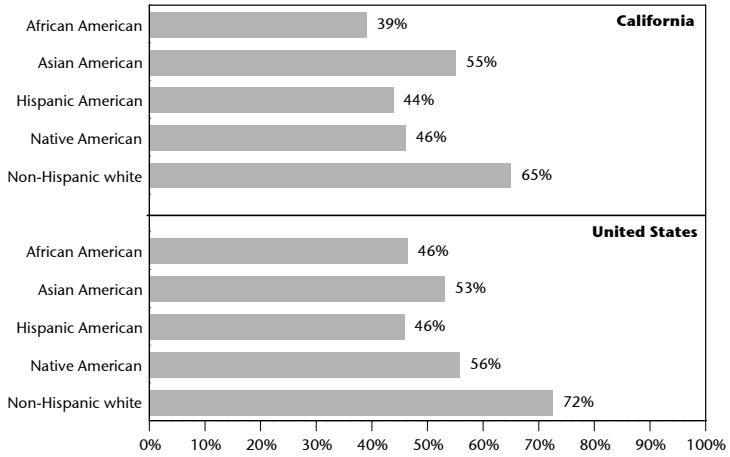
[40] Ladd, Helen F. 1982. "Equal Credit Opportunity: Women and Mortgage Credit." *The American Economic Review.* 72:166-170.

[41] Card, Emily. 1980. "Women, Housing Access, and Mortgage Credit." *Signs.* 5:215-219.

Figure F-13 presents rates of homeownership for minority groups and non-Hispanic whites in California and the nation in 2000. About 39 percent of African American households were homeowners compared with 65 percent of non-Hispanic whites in the state. Homeownership rates were also particularly low for Hispanic Americans and Native Americans in California. Overall rates of homeownership were lower in California than the nation, in part due to the historically high price of homes in the state.[42]

Figure F-13.
Homeownership rates, 2000

Source:
U.S. Census Bureau, KnowledgePlex Calculations, an online resource maintained by the Fannie Mae Foundation.



BBC also examined homeownership rates for heads of household who worked in the construction industry and engineering industry. Disparities in homeownership rates found for all California households were also identified for households in which the head of household worked in the construction industry. Differences in homeownership rates also persist for African Americans and Hispanic Americans working in the engineering industry.

Different rates of homeownership in part reflect lower incomes for minorities. This may be self-reinforcing, as low wealth puts individuals at a disadvantage in becoming homeowners, which is an effective path to building wealth. One study found statistically significant results indicating that the probability of homeownership is considerably lower for African Americans than it is for comparable non-Hispanic whites throughout the U.S.[43] A study in Los Angeles found different results. Controls for types of income indicated that probabilities of homeownership for African American households in South-Central Los Angeles and San Bernardino County were identical to white households.[44]

Home values. Homeownership and the value of the home is a direct indicator of capital available to form or expand businesses. For example, using microdata from matched Current Population Surveys (1993-2004), one study found that differences in housing appreciation between metropolitan areas affected entry into self-employment. The study indicated that a 10 percent annual increase in housing equity increases the mean probability of entrepreneurship by approximately 20 percent.[45]

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[42] Quigley, John M. and Steven Raphael. 2004. "Regulation and the High Cost of Housing in California." *University of California, Berkeley.*

[43] Jackman. 1980. "Racial Inequalities in Home Ownership."

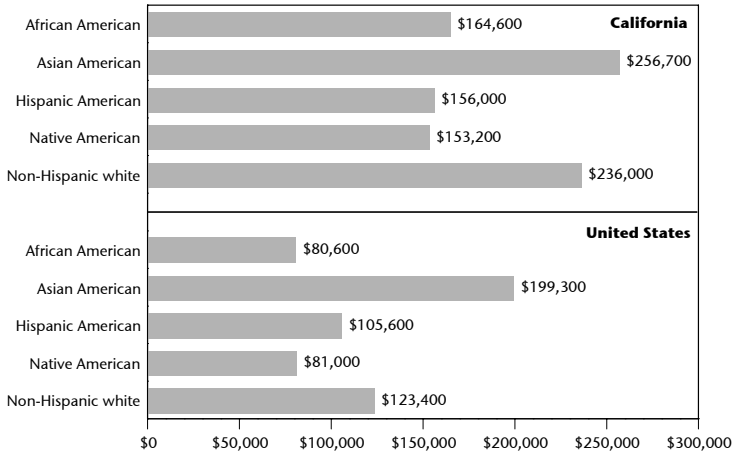
[44] Gabriel, Stuart and Gary Painter. 2001. "Pathways to Homeownership: An Analysis of the Residential Location and Homeownership Choices of Black Households in Los Angeles." *USC Finance & Business Econ.* Working Paper No. 01-22.

[45] Fairlie, Robert W. and Harry A. Krashinky. 2006. "Liquidity Constraints, Household Wealth, and Entrepreneurship Revisited." *IZA Discussion Paper.* No. 2201.

U.S. Bureau of the Census data on home values in 2000 allow comparisons of median home values by race and ethnicity. The median home value of non-Hispanic whites in 2000 was $236,000 in California, substantially above the median value of homes owned by minorities. (e.g., only $164,600 for African Americans in California and less for Hispanic Americans and Native Americans). The differences in median home values seen for minorities compared with non-Hispanic whites in California are similar to the differences seen for the United States as a whole.

Figure F-14.
Median home value, 2000

Source:
U.S. Census Bureau, Census 2000 and BBC Research and Consulting.



Steering by real estate agents. A number of researchers have found that discrimination by real estate agents contributes to residential segregation of minorities.[46] One such practice is "steering" of prospective homebuyers toward particular neighborhoods and away from others because of their race or ethnicity (a practice that has been prohibited by law for many decades). A recent study found such practices in Los Angeles and other cities throughout the country.

Mortgage lending. Minorities may be denied opportunities to own homes, to purchase more expensive homes or to access equity in their homes if they are discriminated against when applying for home mortgages. BBC explored this issue.

The best source of information concerning mortgage lending discrimination is Home Mortgage Disclosure Act (HMDA) data. HMDA data pertain to information about mortgage loan applications for financial institutions, savings banks, credit unions and some mortgage companies.[47] The data contain information about the location, dollar amount, and types of loans made, as well as racial and ethnic information, income, and credit characteristics of all loan applicants. The data are available for home purchases, loan refinances, and home improvement loans.

[46] Galster, George and Erin Godfrey. 2005. "Racial Steering by Real Estate Agents in the U.S. in 2000." *Journal of the American Planning Association.* 71:251-268.

[47] Financial institutions are required to report HMDA data if they have assets of more than $32 million, have a branch office in a metropolitan area, and originated at least one home purchase or refinance loan in the reporting calendar year. Mortgage companies are required to report HMDA if they are for-profit institutions, had home purchase loan originations exceeding 10 percent of all loan obligations in the past year, are located in an Metropolitan Statistical Area (or originated five or more home purchase loans in an MSA) and either had more than $10 million in assets or made at least 100 home purchase or refinance loans in the calendar year.

The study team's analysis uses statistics provided by KnowledgePlex on loan denial rates of high-income borrowers. High-income borrowers include households with 120 percent or more of the U.S. Department of Housing and Urban Development (HUD) area median family income.[48]

Conventional loans are loans not insured by a government program. Loan denial rates are calculated as a share of mortgage loan applications that have either been denied or originated (this excludes terminations of the application process by the potential borrower).

Data on loan denial rates for mortgages in California show higher denial rates for minority than for non-Hispanic white high-income households. Figure F-15 reports loan denial rates for the state and for the nation for 2005. Among high-income households applying for mortgages, 28 percent of African American applicants in California had their applications denied compared with 16 percent of non-Hispanic white households. Loan denial rates were also higher for Native Americans, Hispanic Americans and Asian Americans compared with non-Hispanic whites.

The patterns of loan denial rates by race and ethnicity in California mirror those of the United States as a whole for 2005, although California loan denial rates were higher than national rates for both minorities and non-minorities.

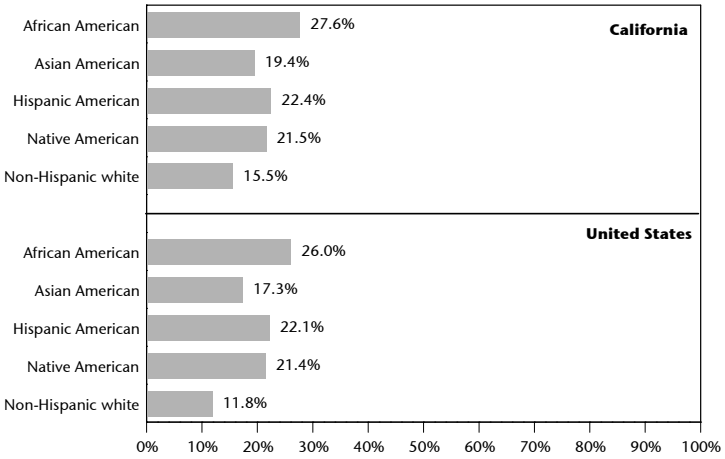
Figure F-15.
Denial rates of conventional purchase loans to high-income households, 2005

Note:

High-income borrowers include households with 120% or more than the HUD area median family income (MFI).

Source:

FFIEC HMDA data 2005 and KnowledgePlex, an online resource maintained by the Fannie Mae Foundation.



A number of national studies have examined disparities in loan denial rates and loan amounts for minorities in the presence of other influences. Examples include the following:

- The Boston Fed Study is one of the most famous studies of mortgage lending discrimination.[49] It was conducted using the most comprehensive set of credit characteristics ever assembled for a study on mortgage discrimination.[50] The study provided persuasive evidence that lenders in the Boston area discriminated against minorities in 1990.[51]

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[48] 2005 median family income is $58,000 for the United States and $62,500 for California. Based on 2000 census data on family incomes. Data are updated to 2005 using Census P-60 median family income data, Census American Community Survey data on changes in state median family incomes and local Bureau of Labor Statistics Wage data.

[49] Munnell, Alicia H., Geoffrey Tootell, Lynn Browne and James McEneaney. 1996. "Mortgage Lending in Boston: Interpreting HMDA Data." The American Economic Review. 86: 25-53.

[50] Ladd, Helen F. 1998. "Evidence on Discrimination in Mortgage Lending." The Journal of Economic Perspectives. 12:41-62.

[51] Yinger, John. 1995. Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination. New York: Russell Sage Foundation, 71.

- Using the Federal Reserve Board's 1983 Survey of Consumer Finances and the 1980 Census of Population and Housing data, logit statistical analysis revealed that minority households were one-third as likely to receive conventional loans as non-Hispanic white households after taking into account financial and demographic controls.[52]
- Findings from a Midwest study indicate a significant relationship between race and both the number and amount of mortgage loans. Data matched on socioeconomic characteristics revealed that African American borrowers across 13 census tracts received significantly less of both compared to their white counterparts.[53]

On the other hand, other studies have found that differences in preferences for FHA versus conventional loans among racial and ethnic groups may partly explain disparities found in conventional loan approvals between minorities and non-minorities.[54] Several studies have found that minority borrowers are far more likely to receive FHA loans than comparable non-Hispanic white borrowers at all income and wealth levels. FHA loans are insured by the government thus protecting the lender, but the borrower can be hurt by higher costs.[55]

Relevant studies are more limited in California.

- Home Mortgage Disclosure Act (HMDA) data revealed disparities in prime and subprime lending for African American, Hispanic American and Native American applicants. Differences extended across all Metropolitan Statistical Areas.[56]
- An older study using HMDA data and a stepwise regression model accounting for socioeconomic status revealed that measures of ethnicity contribute little explanation to mortgage lending in Sacramento.[57]
- A recent paired testing approach revealed adverse treatment of African Americans and Hispanics in Los Angeles. In some cases, the overall pattern of treatment observed did not differ statistically from equal treatment. Multivariate analysis found almost no evidence of systemic variation in the treatment of African American testers in Los Angeles other than encouragement for FHA loans.[58]

Higher fees and interest rates. Denial of loans is only one way that minorities could be discriminated against in the home mortgage market; mortgage-lending discrimination can also reveal itself through high fees and interest rates. The housing market provides a unique atmosphere for this type of discrimination through fees associated with various loan types.

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[52] Canner, Glenn B., Stuart A. Gabriel and J. Michael Woolley. 1991. "Race, Default Risk and Mortgage Lending: A Study of the FHA and Conventional Loan Markets." Southern Economic Journal. 58:249-262.

[53] Leahy, Peter J. 1985. "Are Racial Factors Important for the Allocation of Mortgage Money?: A Quasi-Experimental Approach to an Aspect of Discrimination." American Journal of Economics and Sociology. 44:185-196.

[54] Canner. 1991. "Race, Default Risk and Mortgage Lending: A Study of the FHA and Conventional Loan Markets."

[55] Yinger. 1995. Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination. 80.

[56] Gee, Peter. 2004. The Price of Credit: Prime and Subprime Lending in California 2004. The Greenlining Institute.

[57] Dingemans, Dennis. 1979. "Redlining and Mortgage Lending in Sacramento." *Annals of the Association of American Geographers.* 69:225-239.

[58] Ross, Stephen, Margery Austin Turner, Erin Godfrey and Robin R. Smith. 2005. "Mortgage Lending in Chicago and Los Angeles: A Paired Testing Study of the Pre-Application Process." *University of Connecticut Department of Economics*. Working Paper Series.

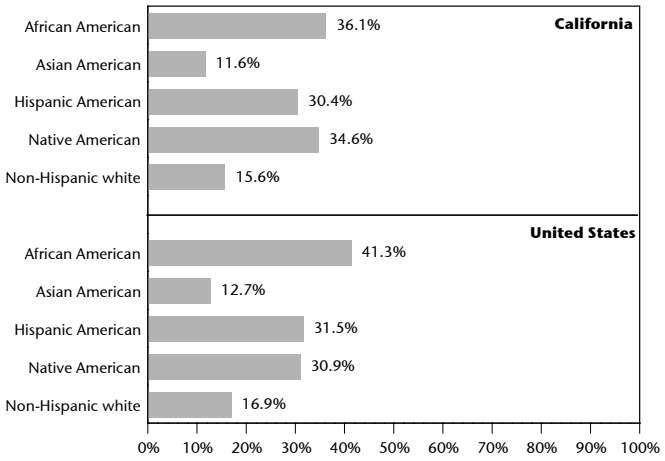
One of the fastest growing segments of the home mortgage industry is subprime lending. From 1994 through 2003, subprime mortgage activity grew by 25 percent per year and accounted for $330 billion of U.S. mortgages in 2003, up from $35 billion a decade earlier. Subprime loans are marketed and sold to customers with blemished or limited credit histories that would typically not qualify for prime loans.

Minorities are more likely to receive a subprime loan, which charge higher interest fees than conventional loans. Financial institutions have been accused of taking advantage of minorities by charging unnecessarily high rates and imposing costs that endanger home ownership. One study found many users of the subprime market are qualified for prime loans.[59]

In California, African American, Native American and Hispanic American borrowers are much more likely to have a subprime loan than non-Hispanic whites. For example, 36 percent of the conventional refinancing loans received by African Americans were from subprime lenders compared with only 16 percent of refinancing loans received by non-Hispanic whites. On the other hand, Asian Americans are less likely than non-Hispanic whites to obtain a mortgage from the subprime market.

Figure F-16.
Percent of conventional refinancing loans from subprime lenders, 2004

Source:
FFIEC HMDA data 2004 and KnowledgePlex, an online resource maintained by the Fannie Mae Foundation.



Historically, differences in types of loans awarded to minorities have been attributed to steering by real estate agents, who serve as an information filter between buyers and sellers.[60] Some studies claim that real estate brokers provide different levels of assistance and different information on loans to minorities and non-minorities.[61] This "steering" can shape the perceived availability of loans to minority borrowers.

Home value appraisal is another means of discrimination in mortgage lending. Differences in appraisal values can change the loan-to-value ratio, an indicator of risk for lending institutions. Findings suggest that minorities and women have been subject to the under-appraisal of home values.

[59] Freddie Mac. 1996, September. "Automated Underwriting: Making Mortgage Lending Simpler and Fairer for America's Families." *Freddie Mac.* (accessed February 5, 2007).

[60] Kantor, Amy C. and John D. Nystuen. 1982. "De Facto Redlining a Geographic View." *Economic Geography.* 4:309-328.

[61] Yinger. 1995. Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination. 78–79.

One study suggests that appraisers lower appraisal values for minorities.[62] Another study found that minorities have higher loan-to-value ratios.[63]

Other potential forms of discrimination by lenders are more difficult to analyze and document.[64] Areas include outreach and application procedures (i.e. helping non-minority applications look stronger), loan terms determined by the lender (interest rates, maturity, loan-to-value ratio and loan types), underwriting standards that may disproportionately affect minorities and women, and default and foreclosure options.

Anecdotal evidence suggests that African American home seekers generally must expend more time, effort and resources than non-Hispanic whites for the same end.[65] Minorities and women may also believe they are required to produce greater levels of equity and hard collateral in order to secure debt than their non-minority male counterparts and have fewer options for investment capital.[66]

Redlining. Redlining is the term for mortgage lending discrimination to geographic areas associated with high lender risk. These areas are often racially determined, such as African American and mixed race neighborhoods.[67] This practice can perpetuate problems in already poor neighborhoods.[68]

For example, the City of East Palo Alto sued a California lender for redlining and having loan practices that discriminated against people in low income or minority communities. Evidence included loan officers telling applicants that the bank simply did not lend in East Palo Alto or in specific minority neighborhoods.[69] The bank provided cash and a revolving loan fund in order to settle the lawsuit.

Most quantitative studies have failed to find strong evidence in support of geographic dimensions of lender decisions. Studies in Columbus, Ohio; Boston, Massachusetts; and Houston, Texas found that the racial differences in loan denial had little to do with racial composition of the neighborhood, but rather the individual characteristics of the borrower.[70] Some studies found race of the applicant to be a factor in loan denials, not the racial makeup of the neighborhood.

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[62] Yinger. 1995. Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination. 82.

[63] Tootell, Geoffrey M. B. 1996. "Redlining in Boston: Do Mortgage Lenders Discriminate Against Neighborhoods?" *The Quarterly Journal of Economics.* 111:1049-1079.

[64] Yinger. 1995. Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination. 78-81.

[65] Bullard, Robert D. 1990. "Housing Barriers: Trends in the Nation's Fourth-Largest City." *Journal of Black Studies.* 21:4-14.

[66] Darryl E. Greene & Associates, P.C., and Triaxial Management Services, Inc., a Joint Venture. 1994. *DBE/MBE/WBE Predicate Study: Preliminary.* Los Angeles County Metropolitan Transportation Authority.

[67] Holloway, Steven R. 1998. "Exploring the Neighborhood Contingency of Race Discrimination in Mortgage Lending in Columbus, Ohio." *Annals of the Association of American Geographers.* 88:252-276.

[68] Ladd, Helen F. 1998. "Evidence on Discrimination in Mortgage Lending." *The Journal of Economic Perspectives.* 12:41-62.

[69] "California bank pays $206,000 and establishes $7 million credit line for city to settle redlining suit." *National Fair Housing Advocate Online.* http://www.fairhousing.com/index.cfm?method=page.display&pagename=advocate_october02_page5 (accessed February 8,2007).

[70] See Holloway.1998. "Exploring the Neighborhood Contingency of Race Discrimination in Mortgage Lending in Columbus, Ohio."; Tootell. 1996. "Redlining in Boston: Do Mortgage Lenders Discriminate Against Neighborhoods?"; and Holmes, Andrew and Paul Horvitz. 1994. "Mortgage Redlining: Race, Risk, and Demand." *The Journal of Finance.* 49:81-99.

Studies of redlining have primarily focused on the geographic aspect of lender decisions; however, redlining can also include the practice of restricting credit flows to minority neighborhoods through procedures that are not observable in actual loan decisions. Examples include branch placement, advertising and other pre-application procedures.[71] These practices can deter minorities from starting businesses. Locations of financial institutions are important to small business start up because local banking sectors often finance local business. [72] Redlining practices would deny this capital resource to minorities.

Gender discrimination in mortgage lending. Relatively little information is available on sex-based discrimination in mortgage lending markets. Historically, lending practices overtly discriminated against women by requiring information on marital and childbearing status. Risk associated with women of childbearing age and unmarried women resulted in "income discounting," limiting the availability of loans to women.[73]

The Equal Credit Opportunity Act (ECOA) in 1973 suspended these discriminatory lending practices. A study in California explored discrimination against married and single women in 16 metropolitan areas from 1977 to 1978. Regression analysis revealed little evidence of sex discrimination in California. Barriers have continued after 1973, however. For example, there is some evidence that lenders under-appraise property for female borrowers.[74]

Access to Business Capital

Barriers to capital markets can have significant outcomes for small business formation and expansion. "Discrimination in obtaining loans due to race and gender," was identified as an issue for businesses during Caltrans public hearings held in spring 2006.[75] In addition, several studies have found evidence that start-up capital is important for business profits, longevity and other outcomes.[76]

- The amount of start-up capital is positively associated with small business sales and other outcomes.[77]
- Limited access to capital has limited the size of African American-owned businesses.[78]
- Weak financial capital was identified as a significant reason that more African American-owned firms than non-Hispanic white-owned firms closed over a four-year period.[79]

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[71] Yinger, John. 1995. "Closed Doors, Opportunities Lost: The Continuing Costs of Housing Discrimination." Russell Sage Foundation. New York. 78-79.

[72] Holloway. 1998. "Exploring the Neighborhood Contingency of Race Discrimination in Mortgage Lending in Columbus, Ohio."

[73] Card. 1980. "Women, Housing Access, and Mortgage Credit."

[74] Ladd, Helen F. 1982. "Equal Credit Opportunity: Women and Mortgage Credit." *The American Economic Review*. 72:166-170.

[75] Caltrans Public Hearing Testimony and Related Documents. Examined and summarized by GCAP Services.

[76] For examples see Fairlie. 2006. "Liquidity Constraints, Household Wealth, and Entrepreneurship Revisited;" and Grown, Caren and Timothy Bates. 1991. "Commercial Bank Lending Practices and the Development of Black-Owned Construction Companies." Center for Economic Studies, U.S. Bureau of the Census.

[77] See Fairlie, Robert W. and Harry A. Krashinsky. 2006. "Liquidity Constraints, Household Wealth, and Entrepreneurship Revisited"; and Grown. 1991. "Commercial Bank Lending Practices and the Development of Black-Owned Construction Companies."

[78] Grown. 1991. "Commercial Bank Lending Practices and the Development of Black-Owned Construction Companies."

Bank loans are one of the largest sources of debt capital for small businesses.[80] Discrimination in the application and approval processes of these loans and other credit resources could be detrimental to the success of minority- and women-owned businesses.

Previous studies have addressed race, ethnic and gender discrimination in capital markets by evaluating:

- Loan denial rates;
- Loan values;
- Interest rates;
- Individual assumptions that loan applications will be rejected;
- Sources of capital; and
- The relationship between start-up capital and business survival.

To examine these questions, the study team analyzed data from the Federal Reserve Board's 1998 Survey of Small Business Finances (SSBF) conducted by the Board of Governors. It is the most comprehensive national source of credit characteristics of firms with fewer than 500 employees. Sample weights are applied to provide representative estimates.[81] The survey contains information on loan denial and interest rates, as well as anecdotal information from firms. The sample contains records for 3,521 firms nationally.

The SSBF records the geographic location of the firm by census division, not city or state. The Pacific Census Division contains California.[82]

Loan denial rates. Figure F-17 on the following page shows loan denial rates from the 1998 SSBF for the Pacific region. In the Pacific, 32.5 percent of minority-owned firms reported loan denial. Non-minority owned firms reported a lower rate.

The BBC study team was unable to report robust statistics on individual minority groups due to limited sample sizes. However, analysis of the Pacific region from the 1998 SSBF revealed patterns consistent with national results:

- African American-owned businesses experienced higher rates of denial than all other groups in the Pacific region;
- Hispanic American-owned firms had a loan denial rate considerably above Hispanic whites; and
- Asian American-owned firms had relatively high rates of loan denial.

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[79] Grown. 1991. "Commercial Bank Lending Practices and the Development of Black-Owned Construction Companies."

[80] Data from the 1998 SSBF indicates that 70 percent of loans to small business are from commercial banks. This result is present across all gender, race and ethnic groups with the exception of African Americans, whose rate of lending from commercial banks is even greater than other minorities. See Blanchard, Lloyd, Bo Zhao and John Yinger. 2005. "Do Credit Market Barriers Exist for Minority and Woman Entrepreneurs." *Center for Policy Research, Syracuse University.*

[81] Ethnicity and race were analyzed using the following methodology: A non-Hispanic white firm is a firm that is not Hispanic and not minority; an African American firm is black/African American and not Hispanic; Hispanic American is all firms that identify as Hispanic; and Asian-Pacific American is either Asian, Native American or Native Hawaiian and not Hispanic. Firms that claimed "sometimes approved/sometimes denied" were given half weights to the loan denial rate. Weighted rates and means were computed. The sample size is unweighted.

[82] The Pacific Census Division includes Alaska, California, Hawaii, Oregon and Washington.

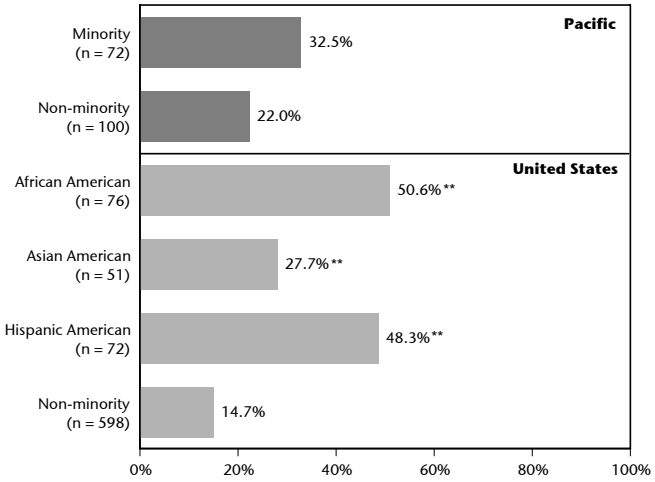
Figure F-17.
Business loan denial rates, 1998

Note:

** Denotes that the difference in proportions from non-minority is statistically significant at the 95% confidence level.

Source:

BBC Research and Consulting from 1998 Survey of Small Business Finances.



A number of studies have developed regression models to isolate the effects of race and ethnicity from other factors that affect loan approvals. Findings from these studies include:

- Commercial banks are less likely to loan to African American-owned firms than to non-Hispanic white-owned firms, after controlling for other factors.[83]
- African American, Hispanic American and Asian American men are more likely to be denied for a loan than non-Hispanic white men. However, African American borrowers are more likely to apply for a loan.[84]
- There are substantial unexplained differences in credit applications, loan denials and interest rates between non-Hispanic white- and African American-owned firms. Competitiveness of lender markets helps to explain these disparities.[85]
- The probability of loan denial decreases with greater personal wealth. However, controlling for personal wealth does not resolve the large differences in denial rates across African American-, Hispanic American-, Asian American-, and non-Hispanic white-owned firms. Specifically, information on personal wealth explained some differences for Hispanic- and Asian American-owned firms compared to non-Hispanic whites, but almost none for African Americans.[86]
- Loan denial rates are significantly higher for African American-owned firms than non-Hispanic white-owned firms in the presence of several other factors such as creditworthiness and other characteristics. This result is largely insensitive to econometric specification. Consistent evidence on loan denial rates and other indicators of discrimination in credit markets was not found for other minorities and women.[87]

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[83] Cavalluzzo, Ken, Linda Cavalluzzo and John Wolken. 2000. "Competition, Small Business Financing and Discrimination: Evidence from a New Survey." *FEDS Working Paper No. 99-25*

[84] Coleman, Susan. 2002. "Characteristics and Borrowing Behavior of Small, Women-owned Firms: Evidence from the 1998 National Survey of Small Business Finances." *The Journal of Business and Entrepreneurship.* 151-166.

[85] See Cavalluzzo, 2000. "Competition, Small Business Financing and Discrimination: Evidence from a New Survey."

[86] Cavalluzzo, Ken and John Wolken. 2002. "Small Business Turndowns, Personal Wealth and Discrimination." *FEDS Working Paper No. 2002-35.*

[87] Blanchflower, David G., Phillip B. Levine and David J. Zimmerman. 2003. "Discrimination in the Small Business Credit Market." *The Review of Economics and Statistics.* 85:930-943.

Using data from the 1998 NSSBF and controlling for other variables, previous studies demonstrated that women are no less likely to apply for or to be approved for loans.[88] In its own analyses, reported in Appendix H, the study team explored the relationships between loan denial and race/gender of firm ownership. These relationships were explored using multivariate statistical models that appropriately controlled for a wide variety of neutral factors that explain the likelihood of a firm's loan denial, including the credit and financial help of the owner and of the business and contextual characteristics of the lending environment. Results of this analysis are presented in Figure H-11.

Loan values. Beyond loan denial rates, the study team considered the loan values for firms receiving loans. Results from the 1998 NSSBF for the most recent loan values awarded by ethnicity, race and gender are given in Figure F-18.

In the Pacific, the average loan amount for non-Hispanic whites was $205,712. Minority-owned firms had lower loan amounts:

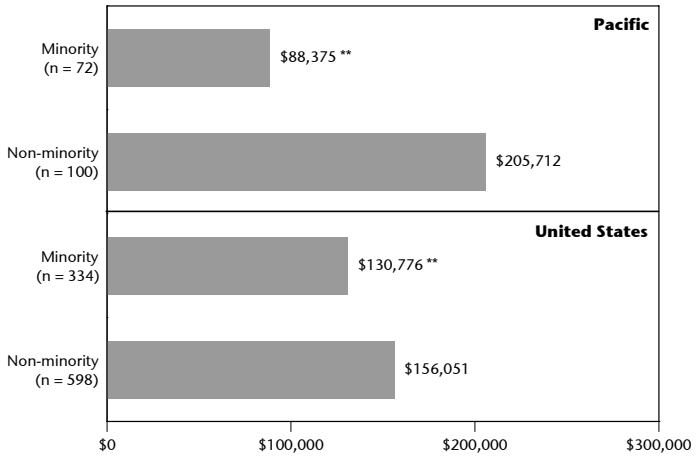
- Minority-owned firms received loan amounts that averaged less than half of the loan amounts awarded to non-Hispanic white-owned firms.
- A similar trend exists for minority-owned firms on a national level, but the difference is much smaller than in the Pacific region.

The differences for minority firms reflected lower loan amounts requested.

Figure F-18.
Mean value of approved business loans, 1998

Note:
** Denotes that the difference in means from non-minority is statistically significant at the 95% confidence level.

Source:
BBC Research and Consulting from 1998 Survey of Small Business Finances.



Previous national studies have found that African American-owned firms receive substantially lower loan amounts than their non-Hispanic white counterparts with similar characteristics. Examination of construction companies in the United States revealed that African American-owned firms received smaller loans than firms with otherwise identical traits. This increases the likelihood of firm closure. [89]

[88] Coleman. 2002. "Characteristics and Borrowing Behavior of Small, Women-owned Firms: Evidence from the 1998 National Survey of Small Business Finances."

[89] Grown. 1991. "Commercial Bank Lending Practices and the Development of Black-Owned Construction Companies."

Interest rates. Figure F-19 presents average interest rates on commercial loans from the 1998 SSBF. The mean interest rates for African American-owned firms, Asian-Pacific American-owned firms and Hispanic-owned firms in the Pacific region are similar to the mean interest rate for non-Hispanic whites of 9.7 percent.

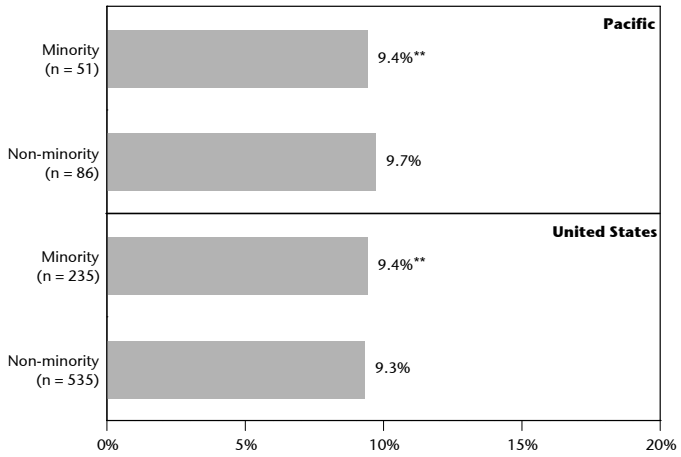
Figure F-19.
Mean interest rate for business loans, 1998

Note:

** Denotes that the difference in mean from non-minority is statistically significant at the 95% confidence level.

Source:

BBC Research and Consulting from 1998 Survey of Small Business Finances.



The results above are similar to some studies of interest rates charged for commercial loans that controlled for factors such as individual credit history, firm credit history, and Dun and Bradstreet credit scores.[90] Differences were found in some studies:

- Hispanic-owned firms had significantly higher interest rates in places with less credit market competition.[91]
- Among a sample of firms with no past credit problems, African American-owned firms paid significantly higher interest rates on approved loans.[92]

Individual assumptions that loan applications will be rejected. Fear of loan denial is a barrier to capital markets because it prevents small businesses from applying for loans and thus can help explain differences in business outcomes. In addition, it provides insight into minority business owners' perceptions of the small business lending market. Figure F-20 shows results from the 1998 SSBF on firms that reported needing credit but did not apply because they feared denial. Minority-owned firms were more likely to avoid applying for loans due to fear of denial than non-minority owned firms.

The BBC study team was unable to report robust statistics on individual minority groups in the Pacific region due to limited sample sizes. However, results for African American- and Hispanic American-owned firms were similar to national results.

[90] Cavalluzzo. 2000. "Competition, Small Business Financing and Discrimination: Evidence from a New Survey."

[91] Cavalluzzo. 2000. "Competition, Small Business Financing and Discrimination: Evidence from a New Survey."

[92] Blanchflower. 2003. "Discrimination in the Small Business Credit Market."

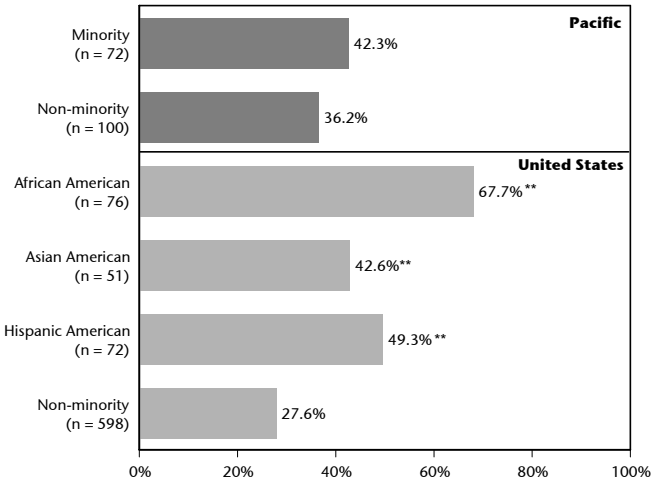
Figure F-20.
Firms that needed loans but did not apply due to fear of denial, 1998

Note:

** Denotes that the difference in proportions from non-minority is statistically significant at the 95% confidence level.

Source:

BBC Research and Consulting from 1998 Survey of Small Business Finances.



The body of literature identifies multiple factors that influence the decision to apply for a loan, such as firm size, firm age, owner age and educational attainment. Controlling for these factors can help to determine whether race and ethnicity explain fear of loan denial. Findings indicate:

- African American- and Hispanic American-owners are significantly less likely to apply for loans.[93]
- After controlling for educational attainment, there were no significant differences in loan application rates between non-Hispanic white, African American, Hispanic and Asian American men.[94]
- African American-owned firms are more likely than other firms to report being seriously concerned with credit markets and are less likely to apply for credit in fear of denial.[95]

Comments concerning access to capital from firms interviewed in the 2006 Availability Survey. Near the conclusion of the interviews with business owners and managers in the transportation construction and engineering industry, the 2006 Availability Survey included the following open-ended question:

> *Finally, we are giving business owners and managers an opportunity to offer general insights on your industry, including how difficult it is to start or expand your business and to [bid / propose] on and win work. As you are thinking, be sure to consider any issues related to Caltrans and local government projects in California. What thoughts do you have to offer on these topics?*

[93] Cavalluzzo, 2000. "Competition, Small Business Financing and Discrimination: Evidence from a New Survey."

[94] Coleman, Susan. 2004. "Access to Debt Capital for Small Women- and Minority-Owned Firms: Does Educational Attainment Have an Impact?" *Journal of Developmental Entrepreneurship*. 9:127-144.

[95] Blanchflower et al., 2003. Discrimination in the Small Business Credit Market.

The questions asked were open-ended by design, which affects the number of comments concerning each potential barrier. If the study team had specifically asked about each potential barrier, more firms would have identified the issue are as a barrier for their firm. The strength of this methodology is that respondents identified areas of problems unprompted by the interviewers. It shows the degree to which certain barriers were "top of mind" for business owners and managers. BBC coded multiple responses.[96]

Some transportation construction firms mentioned access to capital as a difficulty in starting or expanding their businesses or in working with Caltrans. Unprompted, about 1 percent of firms brought up this issue. Four percent of African American-owned firms responding to the survey mentioned access to capital as a barrier, a greater rate than other firms.

Very few transportation engineering firms identified access to capital as a barrier in the 2006 Availability Survey.

Other factors affecting capital markets. Strength in the ethnic banking sector influences credit accessibility in ethnic communities in Los Angeles. A strong Asian American bank sector helped Asian American communities transition to successful business environments, and a lack of strong banking sectors in African American communities could hinder development of African American businesses.[97]

Bonding

Although little quantitative information exists regarding MBEs and WBEs and access to surety bonds for public construction projects, there is anecdotal evidence that suggests such problems persist.[98] For example, in spring 2006 Caltrans public hearings, one concern among minority, women and small business owners was high insurance and bonding requirements.[99]

Access to bonding and bonding requirements were brought up by a few transportation construction or engineering industry firms when discussing barriers to entry and business success in the 2006 Availability Survey. Somewhat more African American-owned firms interviewed mentioned bonding as a barrier than other firms. Most comments related to bonding were focused on general difficulties in obtaining bonds, particularly for small businesses. Some firms specifically cited Caltrans' bonding requirements as a barrier to obtaining work. For example, one respondent stated, "Caltrans' requirements are pretty stringent in regards to bonding." Another said, "I think Caltrans is looking for big projects from big firms. We are a small firm and can do the job but bonding is the biggest issue."

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[96] For example, if a firm owner responded to the first question by indicating that slow payment and contract specifications were barriers, BBC tracked both responses. If the firm owner answered the second question with further elaboration on slow payment, and then added a comment about difficulty finding information about contract opportunities, the information on bidding comment was added to the combined responses for that firm.

[97] Dymski, Gary and Lisa Mohanty. 1999. "Credit and Banking Structure: Asian and African-American Experience in Los Angeles." *The American Economic Review.* 89:362-366.

[98] Enchautegui, Maria E. et al. 1997. "Do Minority-Owned Businesses Get a Fair Share of Government Contracts?" *The Urban Institute:* 1-117, p. 56.

[99] Caltrans Public Hearing Testimony and Related Documents. Examined and summarized by GCAP Services.

Summary of Entry into the Industry

BBC's analysis suggests that barriers to entry into the transportation construction and engineering industry may begin with education and training and continue through forming a business and gaining access to capital. Initial results include:

- College education appears to be a barrier for African Americans, Hispanic Americans and Native Americans. Disparities in educational attainment for African Americans and Hispanic Americans appear at the high school level, which may affect college opportunities. These factors may affect entrance of African Americans, Hispanic Americans and Native Americans into the engineering industry.
- There is low representation of women among civil, environmental and geological engineers.
- African Americans, Asian-Pacific Americans, Hispanic Americans and women working in the engineering industry are less likely to be business owners than others in the industry.
- Representation of African Americans in the construction industry is relatively low compared to other industries in the California, even among entry-level jobs. The representation of women in construction as a whole is relatively low, and very few women are in the construction trades involved in transportation construction.
- There appear to be disparities in the advancement of Hispanics to certain construction occupations and first-line supervisor positions. Relatively few African Americans, Hispanic Americans and women working in construction are managers.
- African Americans, Hispanic Americans, Subcontinent Asian Americans and women in construction are less likely than non-Hispanic whites to own construction businesses.

There is evidence that minority-owned firms face disadvantages in accessing capital necessary to start and expand businesses:

- Relatively fewer African Americans, Hispanic Americans and Native Americans in California own homes than non-Hispanic whites, and those who do own homes tend to have lower home values. Home equity is an important source of capital for business start-up and growth.
- African Americans, Asian Americans, Hispanic Americans and Native Americans applying for home mortgages are more likely than non-minorities to have their applications denied.
- African American, Hispanic American and Native American mortgage borrowers are more likely to have subprime loans.
- African American-, Asian American- and Hispanic American-owned businesses have higher denial rates when applying for business loans, and when they receive loans, have lower loan amounts.
- Relatively more African American- and Hispanic American-owned firms that need credit do not apply for loans because they fear being denied the loan.

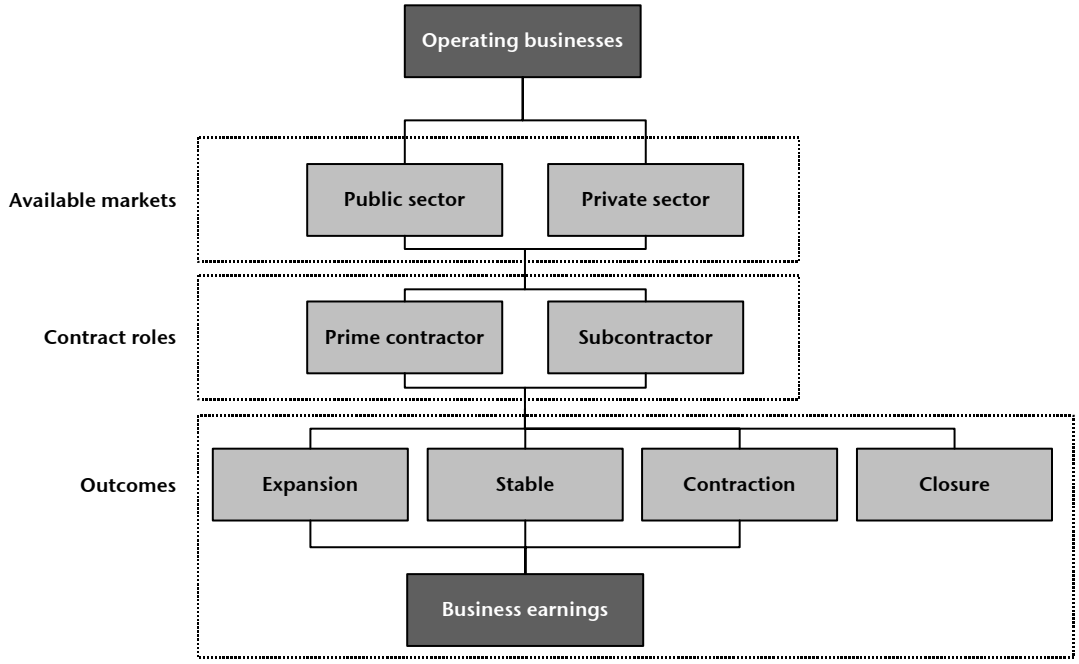
Relative Success of MBE/WBEs

BBC also examined the relative success of MBEs and WBEs once they are operating. The study team examined whether business opportunities and markets for minority- and women-owned transportation construction and engineering firms differ from majority-owned firms. The study team then researched outcomes for MBEs, WBEs and majority-owned businesses, including:

- Businesses discontinuing operations;
- Businesses expanding or contracting;
- Business earnings; and
- Size distribution of gross revenue.

This analysis examines whether some of the patterns found by Congress concerning disparities in outcomes for minority- and women-owned businesses are found in California. Figure F-21 provides a framework for the analysis. BBC begins this section by examining federal data sources on California businesses. The section concludes by analyzing differences in market opportunities and success for MBE/WBEs from the 2006 Availability Survey.

Figure F-21.
Business success



Source: BBC Research and Consulting.

Businesses Discontinuing Operations

The relative number of business failures among minority firms in California has been cited as an indicator of unfavorable business conditions that face minority business owners in the state.

Rates of business closures in California. In 2006, the Discrimination Research Center released a report analyzing the effects of Proposition 209 on DBE survival and utilization. Voter passage of Proposition 209 was one of the factors that led to elimination of race- or gender-conscious project goals for Caltrans' state-funded contracts as well as local agencies' contracts that were not subject to the Federal DBE Program. The Discrimination Research Center report argues that Proposition 209 led to a sharp decrease in the utilization of DBE firms and in the DBE share of overall contract dollars, resulting in the closure of many of these firms.[100]

The study tracked DBEs that had done business with Caltrans in 1996 to assess the net effect of Proposition 209.

- Of the 3,269 construction firms registered as DBEs with Caltrans in 1996, 1,005 remained in operation in 2006, a survival rate of 32 percent.

- The survival rate among African American-owned construction firms registered with Caltrans in 1996 was the lowest of all groups at 27 percent.

However, the implications of these statistics are unclear. The report points out that it does not provide a comparable statistic for the number of non-DBE firms that have closed, so one cannot determine whether DBEs were more likely to close than other firms.

BBC further explored possible data sources that might indicate whether MBEs were more likely to close than other firms. Using data from the 1997 Survey of Minority- and Women-Owned Business Enterprises (SMOBE) provided by the U.S. Census Bureau, the U.S. Small Business Administration reports information regarding employer firm survival rates of minority-owned businesses between 1997 and 2001 across sectors of the economy ("employer firms" are firms with paid employees beyond the business owner and family members). These data identify patterns for each state.

Figure F-22 on the following page shows that 34 percent of African American-owned firms in California in 1997 had closed by 2001, a rate higher than other groups. These findings are consistent with the Discrimination Research Center study of DBEs in California. Firms owned by Native Americans may have lower rates of closure than other firms in California. Rates for Hispanic American- and Asian American-owned firms in California are similar to all firms. The patterns for California are consistent with the United States as a whole for each group of firms except for those owned by Native Americans.

[100] Discrimination Research Center. 2006. Free to Compete?: Measuring the Impact of Proposition 209 on Minority Business Enterprises. Berkeley: 20-21.

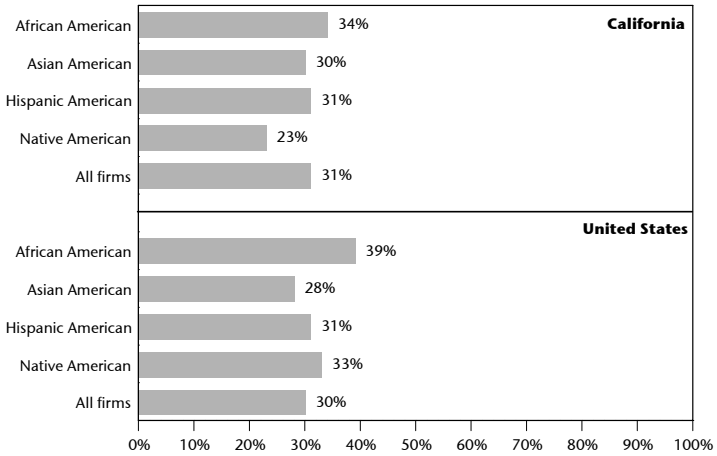
Figure F-22.
Rates of firm closure 1997-2001, California and the U.S.

Note:

Data refers only to employer firms. Sample sizes not reported, but statistics are consistent with SBA data quality guidelines.

Source:

U.S. Census Bureau and Lowrey, Ying. U.S. Small Business Administration Office of Advocacy. "Dynamics of Minority-Owned Employer Establishments, 1997-2001." Washington D.C.



Rates of business closures for construction firms. The data shown in Figure F-23 compare national rates of closure for construction firms to national rates of closure for all firms. The higher closure rate for African American-owned firms was also true when only examining construction firms. Closure rates also appeared to be higher for construction firms owned by Native Americans and for Asian Americans. (No statistics were available from this data source for engineering firms.)

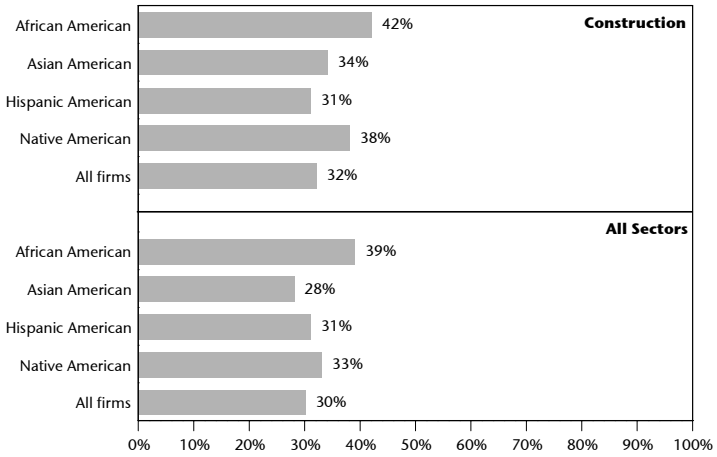
Figure F-23.
Rates of firm closure 1997-2001, construction and all industries in the U.S.

Note:

Data refers only to employer firms. Sample sizes not reported, but statistics are consistent with SBA data quality guidelines.

Source:

U.S. Census Bureau and Lowrey, Ying. U.S. Small Business Administration Office of Advocacy. "Dynamics of Minority-Owned Employer Establishments, 1997-2001." Washington D.C.



Successful versus unsuccessful closures. Not all firm closures can be interpreted as a "failure" of the business. Reasons that a firm may close "successfully" include owner retirement or the emergence of a more profitable business alternative.

To date, the 1992 Characteristics of Business Owners Survey (CBO) is the only dataset released by the Census Bureau that classifies firm closures into successful and unsuccessful subsets.[101] The CBO survey asked owners of businesses that had closed since 1992 the question "Which item below describes the status of this business at the time the decision was made to cease operations?" Only the responses "successful" and "unsuccessful" were permitted. A firm reported to be unsuccessful at time

[101] CBO data from the 1997 and 2002 Economic Censuses do not include statistics on successful and unsuccessful closure. To date, the 1992 CBO is the only U.S. Census dataset that does.

of closure is understood to be a firm failure. Figure F-24 shows comparative data for the proportion of firms closing between 1992 and 1996 that failed.[102]

According to the CBO, closed African American-owned construction firms were the most likely to report "unsuccessful" when asked about the status of the business when it closed. About 82 percent of the African Americans who had owned and closed construction firms reported an unsuccessful business (77 percent for all African American business owners who had closed businesses). Only 58 percent of non-minority men who had owned construction businesses said that their business was unsuccessful at time of closing, a substantial disparity. The differences in status of a construction firm at closing were also large between other minorities (Asian Americans and Native Americans) and non-minority men.

Differences in the successful versus unsuccessful closing of construction firms were only somewhat narrower for other groups:

- About 71 percent of Hispanic Americans who had owned and closed construction businesses reported the business to be unsuccessful at time of closing, a substantial difference from the results for non-minority men.

- About 66 percent of women who had owned and closed construction firms reported the business to be unsuccessful, compared to 58 percent for non-minority men.

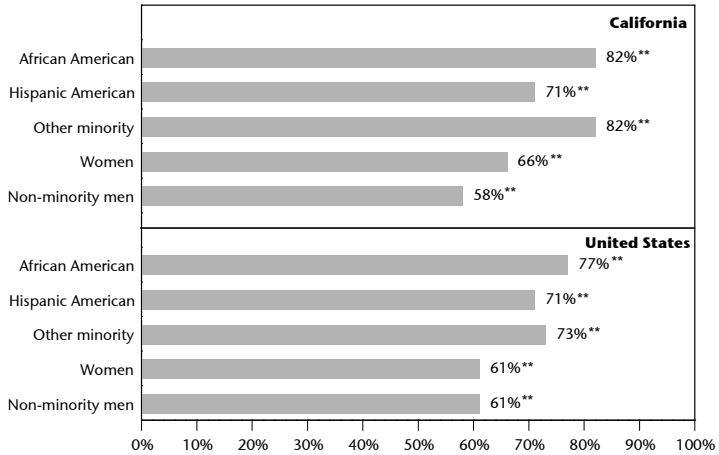
Figure F-24.
Comparative "failure" rates of closed firms1992-1996, construction and all industries in the U.S.

Note:

** denotes that the difference between the indicated proportion and the corresponding proportion for all firms was significant at the 95% confidence level.

Source:

U.S. Census Bureau, 1996 Characteristics of Business Owners Survey (CBO).



Results are similar when comparing successful versus unsuccessful status of closed firms for all sectors combined. Although this analysis is national in scope, these preliminary results suggest that higher overall closure rates for minority-owned firms in California may indicate higher rates of actual business failure.

[102] All CBO data should be interpreted with caution due to the fact that firms that did not respond to the survey cannot be assumed to have the same characteristics of ones that did. This report does not include CBO data on firm closure because firms not responding to the survey were found to be much more likely to have closed than ones that did. Holmes, Thomas J. and James Schmitz. 1996. "Nonresponse Bias and Business Turnover Rates: The Case of the Characteristics of Business Owners Survey." *Journal of Business & Economic Statistics*. 14(2): 231-241.

This study includes CBO data on firm success because there is no compelling reason to believe that closed firms responding to the survey would have reported different rates of success/failure than those closed firms that did not respond to the survey. Headd, Brian. U.S. Small Business Administration, Office of Advocacy. 2000. *Business Success: Factors leading to surviving and closing successfully*. Washington D.C.: 12.

Reasons for differences in failure rates. Several researchers have offered explanations for higher rates of successful closure among non-DBE firms and higher rates of failure among DBE firms:

- Minority business failure is largely due to barriers in access to capital. A regression analysis identifies initial capitalization as the most significant factor in determining firm viability. Because African American-owned businesses secure smaller amounts of debt equity in the form of loans, they are more inclined to fail. Difficulty in accessing capital is found to be particularly acute for minority firms in the construction industry.[103]
- Prior work experience in a family member's business and prior work experience in a similar business are found to be strong determinants of business viability. Because African American business owners are much less likely to have family business experience and/or similar business experience, their firms are less likely to survive.[104]
- Level of education is found to be a strong determinant in business survival. It explains a significant portion of the gap in firm closure rates between African Americans and non-minority firms.[105]
- Non-minority business owners have the opportunity to pursue a much wider array of business activities, which increases their likelihood of closing successful businesses to pursue more profitable business alternatives. Minority business owners, especially those who do not speak English, have greatly limited employment options and are less likely to close a successful business.[106]
- Their possession of greater initial capital and the generally higher levels of education of Asian Americans determine the high rate of survival of Asian American-owned firms compared to other minority-owned firms.[107]

Summary. Available data suggest that closure rates for African American-owned firms in California are higher than other firms. Based on national results for the construction industry, and Discrimination Research Center statistics on differential rates of DBE closures, African American-owned construction firms in California are likely to have had higher rates of closure than other construction firms in California. National data indicate that African Americans who owned and closed construction firms are much more likely to have done so because the firm was unsuccessful. Reasons why business failure rates are higher for African American-owned construction firms have been analyzed at the national level.

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[103] Bates, Timothy and Caren Grown. 1991. "Commercial Lending Practices and the Development of Black-Owned Construction Companies." Center for Economic Studies, U.S. Census Bureau.

[104] Robb, A. and Fairlie, R. 2005. "Why are Black-Owned Businesses Less Successful than White-Owned Businesses? The Role of Families, Inheritances, and Business Human Capital." University of California, Santa Cruz.

[105] Ibid. 24.

[106] Bates, Timothy. 2002. "Analysis of Young Small Firms That Have Closed: Delineating Successful from Unsuccessful Closures." Center for Economic Studies, U.S. Census Bureau.

[107] Bates, Timothy. 1993. "Determinants of Survival and Profitability Among Asian Immigrant-Owned Small Businesses." Center for Economic Studies, U.S. Census Bureau.

Comparative Rates of Expansion and Contraction

Comparative rates of expansion and contraction of MBE and non-MBE firms are also a useful indicator of the relative success of minority-owned businesses.

Expansion. The U.S. Small Business Administration's 2005 study of minority business dynamics from 1997-2001 also examines rates of expansion and contraction for minority-owned firms in California that had paid employees at the starting time period for the analysis ("employer firms").

Figure F-25 compares the percentage of firms that increased their total employment between 1997 and 2001. About one-third of all firms expanded according to the SBA study. However, only 26 percent of African American-owned firms expanded over this period. Relatively more Hispanic American-owned firms expanded over this period compared with all firms in California. The percentage of Native American-owned firms in California that expanded was considerably above the percentage for all firms. The likelihood of expansion was about the same for California Asian American-owned firms as all California firms.

Results for African American-, Asian American- and Hispanic American-owned firms in California are consistent with what was found for the United States for 1997 to 2001.

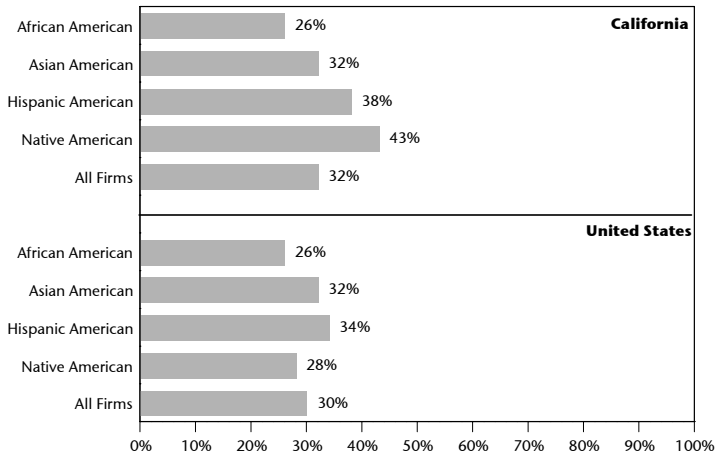
Figure F-25.
Percentage of firms that expanded employment 1997-2001, California and the U.S.

Note:

Data refers only to employer firms. Sample sizes not reported, but statistics are consistent with SBA data quality guidelines.

Source:

U.S. Census Bureau 1997 Survey of Minority- and Women-Owned Business Enterprises (SMOBE) and U.S. Small Business Administration.



The results above are for all firms, not just construction firms. The U.S. Small Business Administration does not report expansion rates for construction firms in California, only for construction firms in the nation.

Figure F-26 examines the percentage of construction firms that expanded and the share of all firms that expanded for the United States. The construction industry showed differences in expansion rates for all groups. As with all firms for the nation, African American-owned construction firms were less likely to have expanded between 1997 and 2001 than all construction firms. Rates of expansion for construction were similar to rates for all industries for each group except for Hispanic American firms, which showed higher rates of expansion in the construction industry. This suggests that differences in overall rates of expansion between minority-owned firms and all firms in California may also be true for the California construction industry.

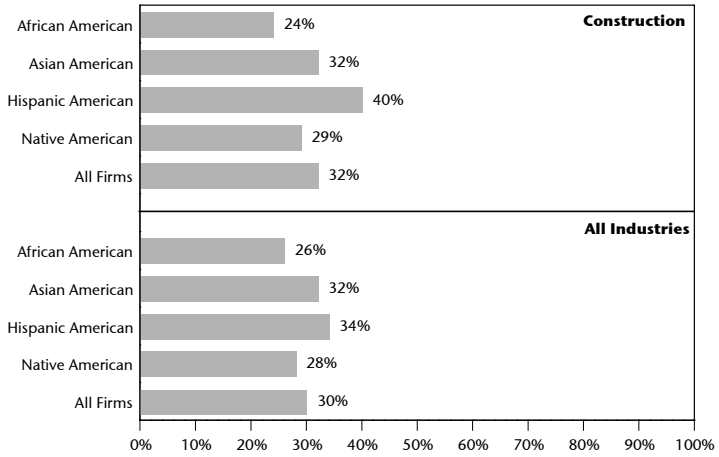
Figure F-26.
Percentage of firms that expanded employment 1997-2001, construction and all industries in the U.S.

Note:

Data refers only to employer firms. Sample sizes not reported, but statistics are consistent with SBA data quality guidelines.

Source:

U.S. Census Bureau 1997 Survey of Minority- and Women-Owned Business Enterprises (SMOBE) and U.S. Small Business Administration.



Contraction. Figure F-27 examines the percentage of firms that reduced their employment between 1997 and 2001. As with the analysis of expanding firms, these data track activity of employer firms beginning in 1997. For each minority group, minority-owned firms were no more likely to have contracted than all firms, in both California and the United States. African American- and Hispanic American-owned firms were less likely to have contracted than all firms, both in California and in the nation.

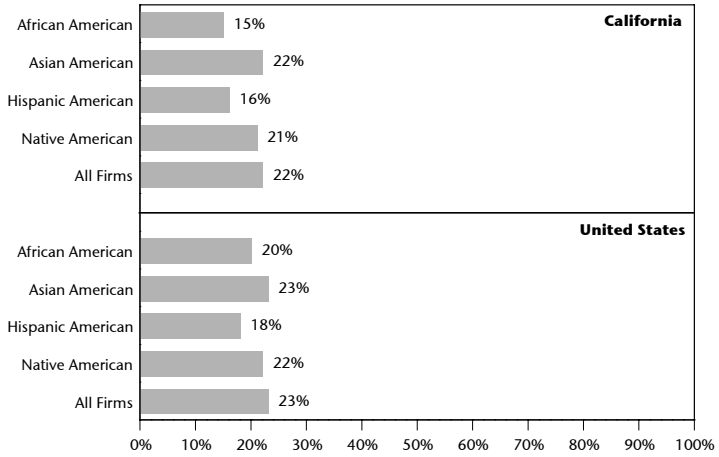
Figure F-27.
Percentage of firms that contracted employment 1997-2001, California and the U.S.

Note:

Data refers only to employer firms. Sample sizes not reported, but statistics are consistent with SBA data quality guidelines.

Source:

U.S. Census Bureau 1997 Survey of Minority- and Women-Owned Business Enterprises (SMOBE) and U.S. Small Business Administration.



The above results pertain to all firms in California. As with expansion, the SBA study did not report results for the California construction industry. However, minority-owned construction firms were no more likely to have contracted than were all construction firms across the nation. Asian-Pacific American- and Hispanic American-owned construction firms had lower rates of contraction than all construction firms in the United States. Figure F-28 shows these results.

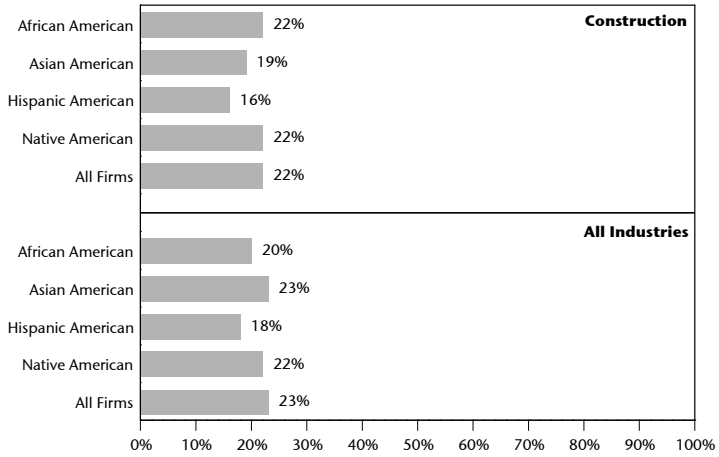
Exhibit F-28.
Percentage of firms that contracted employment 1997-2001, construction firms and all industries in the U.S.

Note:

Data refers only to employer firms. Sample sizes not reported, but statistics are consistent with SBA data quality guidelines.

Source:

U.S. Census Bureau 1997 Survey of Minority- and Women-Owned Business Enterprises (SMOBE) and U.S. Small Business Administration.



Summary. Between 1997 and 2001, the SBA study found that 32 percent of California employer firms had expanded employment, 22 percent had contracted employment and 31 percent had closed (discussed previously in this Appendix).

- African American-owned firms were less likely to expand or contract (and more likely to close than other firms).
- The relative number of Asian American-owned firms was about as likely to expand or contract as all firms in California.
- Native American-owned firms were far more likely to expand and less likely to contract than all firms in the state.
- Hispanic American-owned firms were more likely to expand and less likely to contract than all firms in the state.

Other than African American-owned firms, minority-owned employer firms fared as well or better than all firms in California by these measures of business performance.

Business Earnings

Academics and policymakers have argued that self-employment is an effective means for disadvantaged workers to escape discrimination in the marketplace and advance economically.[108] For a preliminary examination of the relative business success of self-employed minorities and women in the construction and engineering industries, the BBC study team evaluated earnings from the 2000 U.S. Census 5% Public Use Micro-Samples (PUMS data). The sample contains incorporated and unincorporated business owners between ages 16 and 64 that reported positive business earnings.

[108] Fairlie, Robert. 2001. "Earnings Growth Among Disadvantaged Business Owner." *Final Report to the Office of Advocacy, U.S. Small Business Administration.*

Figure F-29 presents earnings for business owners in the construction industry. In California, African American- and Hispanic American business owners have substantially lower earnings than non-Hispanic white business owners. Disparities are particularly large for African American and Hispanic American business owners who earn 30 percent less than non-Hispanic white business owners. On average, female construction business owners earn about one-half of the earnings of majority-owned firm owners. Average owner earnings in the construction industry in California are generally higher than national averages, but show similar trends across gender, race and ethnicity.

Figure F-29. Mean annual business owner earnings, construction industry, 1999

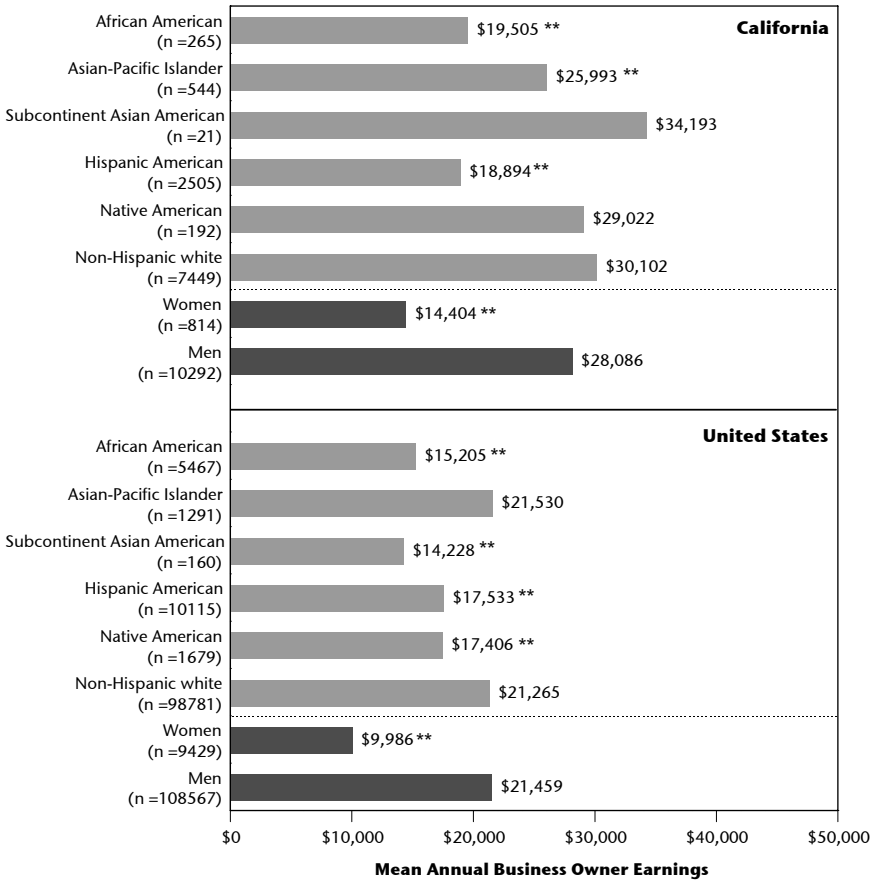
Note:

Universe is business owners between ages 16 and 64 that reported positive earnings.

** Statistically significant at the 95% confidence level.

Source:

BBC Research and Consulting from 2000 U.S. Census 5% Public Use Micro-sample data.



Sample sizes for the California engineering industry are much smaller than construction. Therefore, the study team grouped all minorities and compared average owner earnings to non-Hispanic white owners of engineering firms. Figure F-30 on the following page shows that average minority business owners earnings exceed non-Hispanic white business owner earnings in both California and the United States. These preliminary results largely reflect the higher earnings of Asian American business owners, which comprise a large share of all minority-owned engineering firms in the California portion of the sample.

Appendix H contains the results of multivariate statistical models that explored that the study team conducted to explore whether the disparities in business earnings reported here remained for members of certain minority groups and woman after controlling for neutral explanatory factors, such as the owner's age and education level. These results are reported in Figures H-6, H-7 and H-9 of the corresponding appendix.

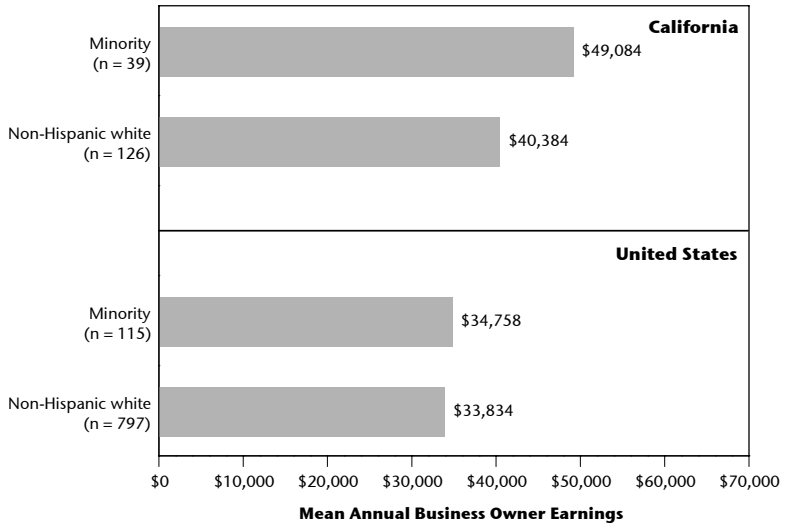
Figure F-30.
Mean annual business owner earnings, engineering industry, 1999

Note:

Universe is business owners between ages 16 and 64 that reported positive earnings.

Source:

BBC Research and Consulting from 2000 U.S. Census 5% Public Use Micro-sample data.



Results for Transportation Construction and Engineering Industry

The study team's Availability Survey provides information on firm revenue, size of contracts and past bidding success.

Gross revenue of transportation construction and engineering firms. Firms responding to the 2006 Availability Survey were asked to identify the size range for their gross revenue in 2005. A second question asked for gross revenue across all California locations for multi-location firms. (The Availability Survey only includes firms working in the transportation construction and engineering industry that report qualifications and interest in working with Caltrans or local governments in the future.) Preliminary results for gross revenue for the single location or across all locations in California are examined here.

Figure F-31 examines the distribution of MBEs, WBEs and majority-owned transportation construction industry firms by revenue class. For example, 70 percent of minority-owned construction industry firms reported gross revenue of less than $1 million.

Relatively more MBEs than WBEs had revenues less than $1 million — 57 percent of white women-owned firms reported gross revenue of less than $1 million for 2005. Only 51 percent of majority-owned construction firms had revenues of less than $1 million.

Figure F-31 demonstrates that relatively few minority- and women-owned firms in the transportation construction industry reach annual revenue of more than $5 million per year. Twenty percent of majority-owned firms reach this revenue threshold compared with 8 percent of MBEs and 11 percent of WBEs in the transportation construction industry.

Figure F-31. Distribution of firms by gross revenue net size class in 2005, transportation construction industry

Note:

WBE is white women-owned firms.

* Statistically significant at the 90% confidence level.

** Statistically significant at the 95% confidence level.

Source:

BBC Research and Consulting from 2006 Availability Survey.

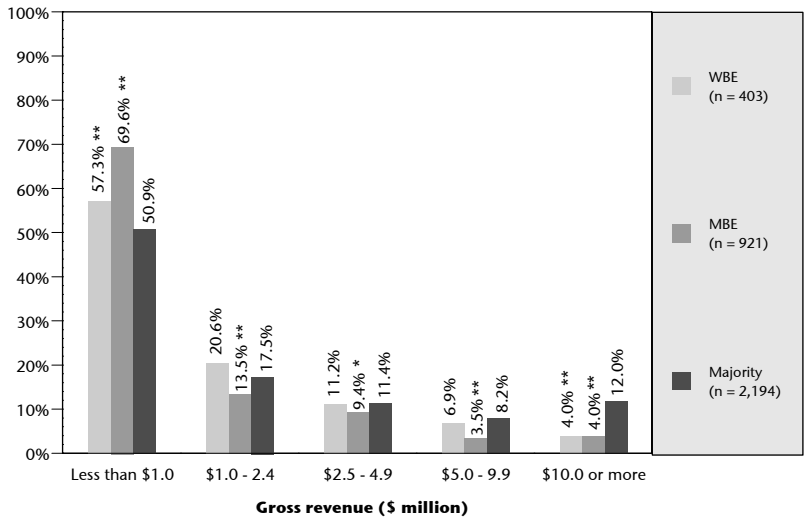


Figure F-32 provides greater detail on transportation construction industry firms that report gross revenue of $5 million or more in 2005. About 11 percent of WBEs and Asian-Pacific American-owned firms reached this revenue level, more than other MBE groups but still short of the proportion of majority-owned firms. Only 4 percent of African American- and Subcontinent Asian American-owned transportation construction industry firms reached this revenue level.

Figure F-32. Percentage of transportation construction industry firms with $5 million or more gross revenues for all California locations in 2005

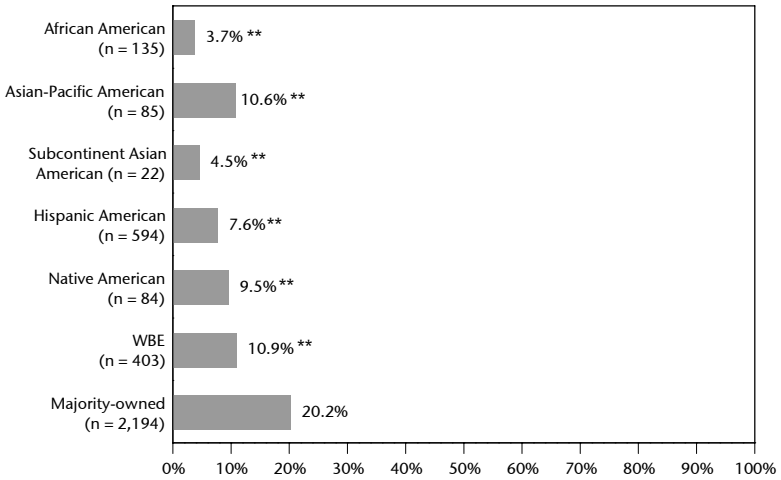
Note:

WBE is white women-owned firms.

** Statistically significant at the 95% confidence level.

Source:

BBC Research and Consulting from 2006 Availability Survey.



Transportation engineering industry firms interviewed in the Availability Survey were also asked to identify gross revenue across all California locations in 2005. Findings are similar to those for transportation construction industry firms (see Figure F-33):

- MBEs and WBEs were disproportionately represented in the lowest revenue size classes.
- About 14 percent of majority-owned firms reported gross revenue of $5 million or more for 2005, a larger proportion than found for MBEs (7 percent) and WBEs (5 percent).

Figure F-33. Gross revenue of company for all California locations in 2005, transportation engineering industry

Note:

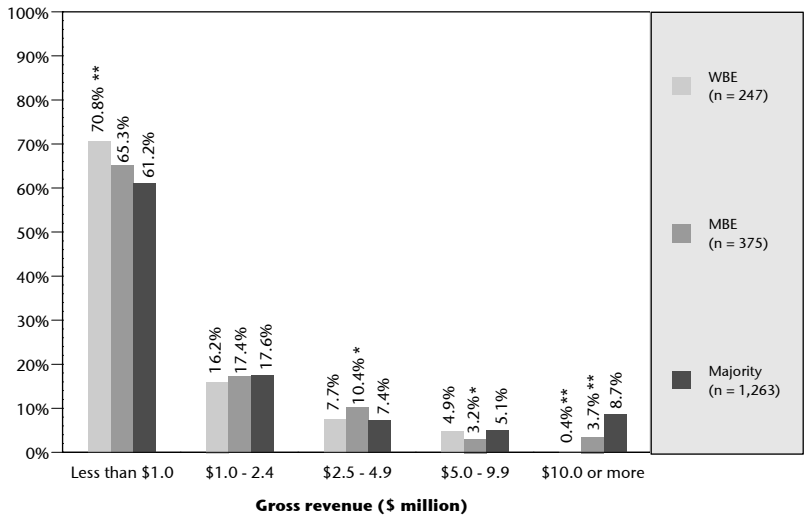
WBE is white women-owned firms.

* Statistically significant at the 90% confidence level.

** Statistically significant at the 95% confidence level.

Source:

BBC Research and Consulting from 2006 Availability Survey.



As with transportation construction industry firms, the study team analyzed the proportion of engineering-related firms by minority group that reached $5 million in annual revenue. Except for Hispanic American-owned firms in the transportation engineering industry, only about 5 percent of MBEs and WBEs had revenue of $5 million or more in 2005 (compared with 14 percent for majority-owned firms). About 11 percent of Hispanic American-owned firms reported this level of revenue (see Figure F-34).

Figure F-34. Percentage of transportation engineering industry firms with $5 million or more in gross revenues for all California locations in 2005

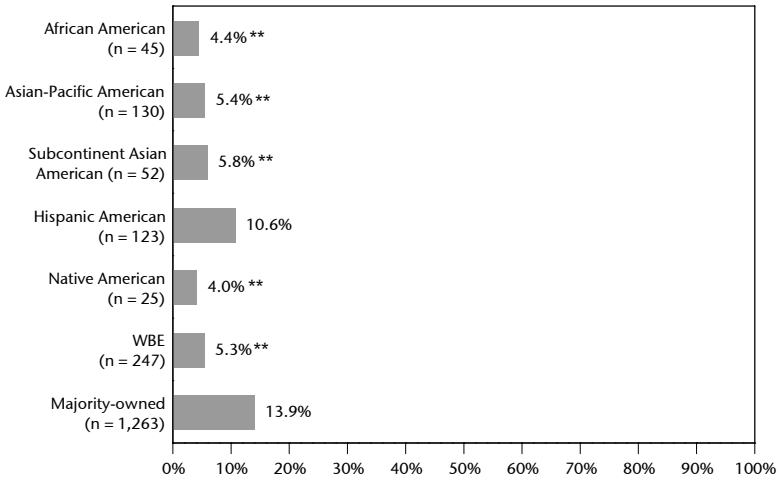
Note:

WBE is white women-owned firms.

** Statistically significant at the 95% confidence level.

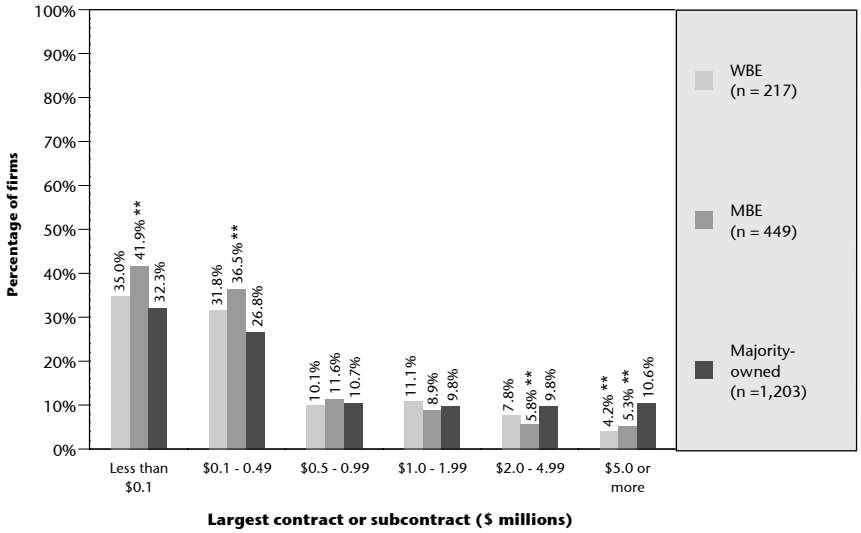
Source:

BBC Research and Consulting from 2006 Availability Survey.



Largest transportation-related contract. The study team asked firms responding to the Availability Survey to identify the largest transportation-related contract the company was awarded in California in the past five years. Relatively more majority-owned construction firms have received contracts or subcontracts of at least $5 million compared with MBEs and WBEs. Only 4 percent of MBEs and 5 percent of WBEs had received contracts or subcontracts of at least $5 million compared with 11 percent of majority-owned firms (see Figure F-35).

Figure F-35.
Largest transportation-related contract or subcontract that the company was awarded in California in the past 5 years, transportation construction firms

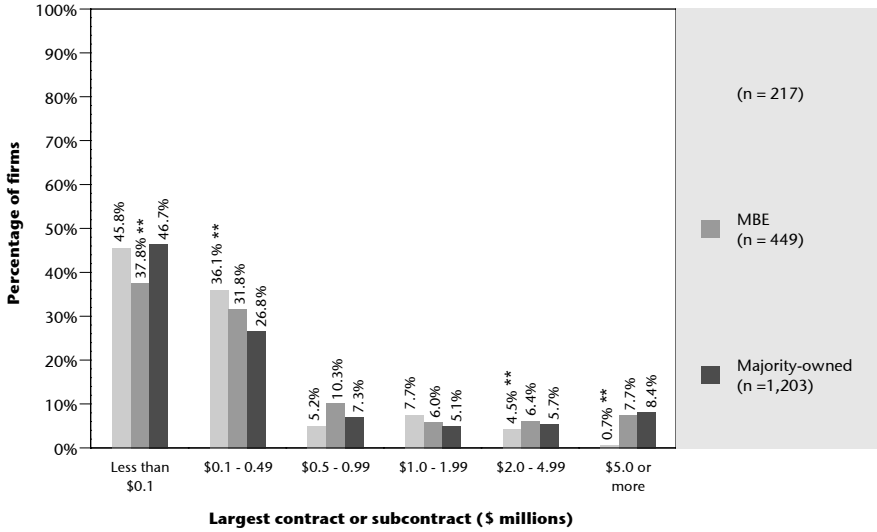


Note: WBE is white women-owned firms.
** Statistically significant at the 95% confidence level.

Source: BBC Research and Consulting from 2006 Availability Survey.

Among transportation engineering firms, about 8 percent of majority- and minority-owned firms had received contracts or subcontracts of at least $5 million. Only 1 percent of WBEs had received work of this size. Figure F-36 examines the largest contract or subcontract received by transportation engineering firms.

Figure F-36.
Largest transportation-related contract or subcontract that the company was awarded in California in the past 5 years, transportation engineering firms



Note: WBE is white women-owned firms.
** Statistically significant at the 95% confidence level.

Source: BBC Research and Consulting from 2006 Availability Survey.

In separate analyses, presented in Appendix H, the study explored the bid capacity for all available firms in order to determine patterns in bid capacity related to the industry segment in which a firm performs its primary work and to MBE/WBE ownership status. In addition to comparing median bid capacity across these categories, the study team also specified and ran a multivariate statistical model to determine whether significant differences in a firm's bid capacity owed to the race and gender of the firm owner. These latter analyses are reported in Figure H-15 for construction firms and in Figure H-16 for engineering firms.

Past bidding on Caltrans, local agency and private sector work. The 2006 Availability Survey asked firm owners and managers whether they had submitted a bid or proposal (including submitting a price quote as a sub or supplier) on transportation-related projects in the past five years. Firms were asked about bidding as a prime or subcontractor on any part of a:

- Caltrans project;
- City, county or local transportation agency project; and
- Private sector project.

Responses only include firms that reported being qualified and interested in future Caltrans or local government transportation construction and engineering work (these were the firms answering the full Availability Survey).

The study team separately examined responses for firms in the transportation construction industry (including supply and trucking specializations) and firms in the transportation engineering industry (including engineering firms and related businesses). Preliminary results indicate the extent to which firms have pursued Caltrans, local agency and private sector work.

Transportation construction industry firms' past bidding on Caltrans work. One-third of majority-owned transportation construction industry firms reporting to be qualified and interested in future transportation construction work in the Availability Survey reported bidding on Caltrans work as a prime or a subcontractor, supplier or trucker in the past five years (including submitting price quotes). Only 13 percent had bid as a prime contractor. About 19 percent had only bid as a subcontractor (including submitting price quotes for supplies or for trucking).

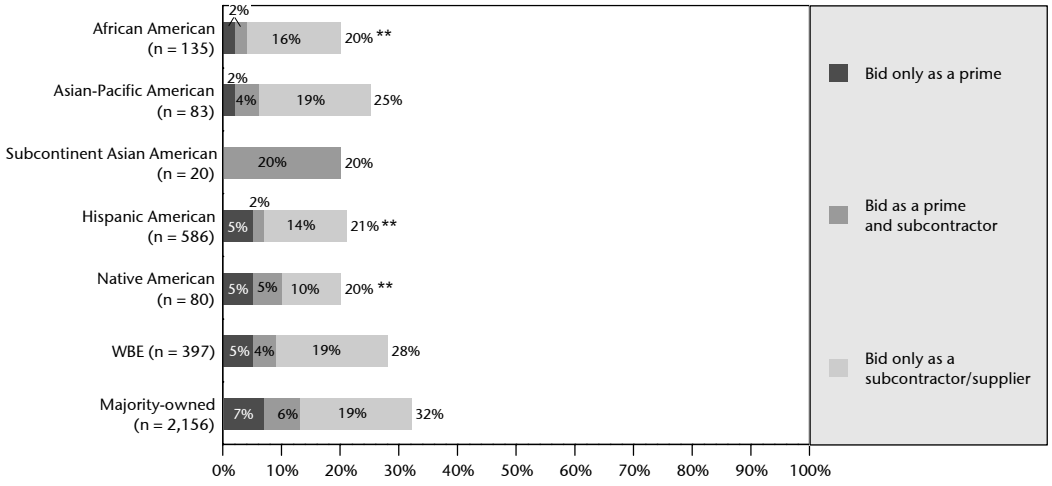
Relatively fewer minority- and women-owned firms reported bidding on past Caltrans work, as shown in Figure F-37.

- Only 20 percent of African American-, Subcontinent Asian American- and Native American-owned firms reported having bid on past Caltrans work.
- About 21 percent of Hispanic American-owned firms indicated bidding on past Caltrans work.
- One-quarter of Asian-Pacific American-owned firms reported bidding on past Caltrans work.

Majority-owned firms were more likely to have bid on prime contracts (13 percent of firms) and subcontracts (25 percent) relative to minority-owned firms. About 10 percent of Native American-owned firms and 7 percent of Hispanic American-owned firms had bid on a prime contract. Other groups of minority-owned firms were less likely to have bid on a Caltrans contract as a prime. No group of minority-owned firms were as likely to have bid on a Caltrans subcontract as majority-owned firms.

The proportion of white women-owned firms bidding on past Caltrans projects (28 percent) was relatively close to the proportion for majority-owned firms.

Figure F-37.
Percent of available transportation construction industry firms that reported submitting a bid for any part of a Caltrans project in the past 5 years



Note: WBE is white women-owned firms.
** Statistically significant at the 95% confidence level.

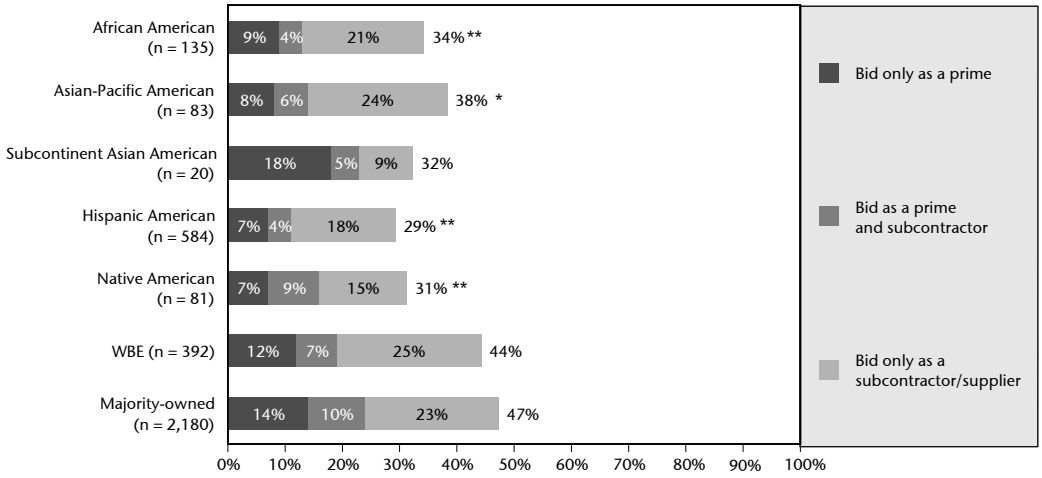
Source: BBC Research and Consulting from the 2006 Availability Survey.

Transportation construction industry firms' past bidding on local government work. Transportation construction industry firms were more likely to have bid on past local government transportation projects. More than 40 percent of majority-owned firms and WBEs reported bidding on city, county or other local agency transportation projects in the past five years (including submitting price quotes). From 29 to 38 percent of minority-owned firms indicated that they had bid on local projects.

Among majority-owned transportation construction industry firms, one-quarter reported bidding as a prime and one-third reported bidding as a subcontractor, supplier or trucker (with some overlap between these groups). WBEs were as likely to have bid as subcontractors, but not as likely to have bid on prime contracts.

Minority-owned firms were not as likely to have bid as primes or as subcontractors as majority-owned firms. Considerably more MBEs had bid on local projects as a prime than had bid on Caltrans projects as a prime. Figure F-38 examines these preliminary results.

Figure F-38.
Percent of available transportation construction industry firms that reported submitting a bid for any part of a local government project in the past 5 years



Note: WBE is white women-owned firms.
* Statistically significant at the 90% confidence level.
** Statistically significant at the 95% confidence level.

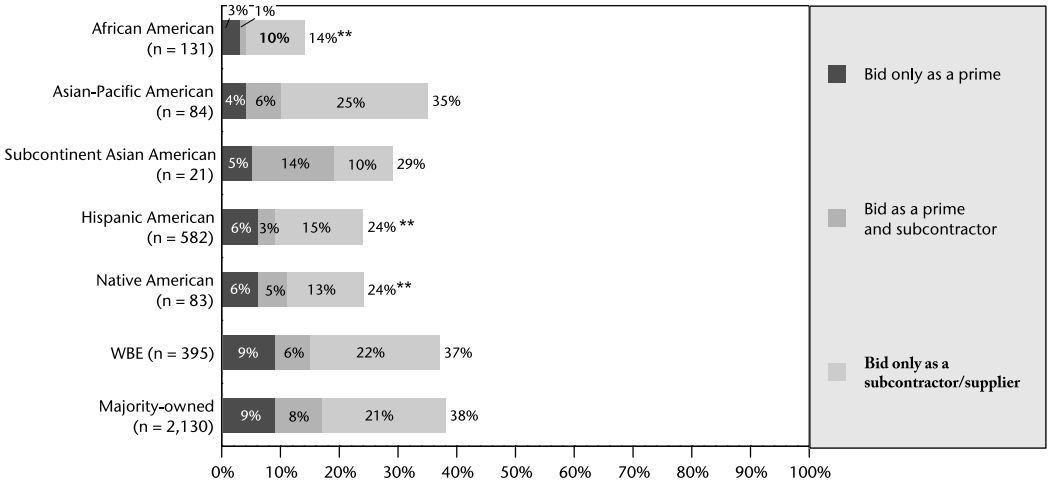
Source: BBC Research and Consulting from the 2006 Availability Survey.

Transportation construction industry firms' past bidding on private sector work. Telephone interviewers also asked firm owners and managers if the firm had bid on a private sector transportation project in the past five years. Except for African American-owned businesses, each group of transportation industry firms was more likely to have bid on private sector work than on Caltrans work:

- Majority-owned firms were somewhat more likely to have bid on private sector work as a subcontractor as bid on Caltrans work as a sub (29 percent versus 25 percent).
- WBEs were much more likely to have bid on private sector work as a subcontractor or a prime contractor than have bid on any part of a Caltrans project.
- Minority-owned firms other than African American-owned firms were more likely to have bid on private sector work as a prime contractor and as a subcontractor.

In contrast, only 4 percent of African American-owned transportation construction industry businesses reported bidding on private sector work as a prime and only 11 percent indicated bidding as a subcontractor. African American-owned firms were more likely to have bid as primes or subs on Caltrans projects. Figure F-39 presents these preliminary results.

Figure F-39.
Percent of available transportation construction industry firms that reported submitting a bid for any part of a private sector project in the past 5 years



Note: WBE is white women-owned firms.
** Statistically significant at the 95% confidence level.

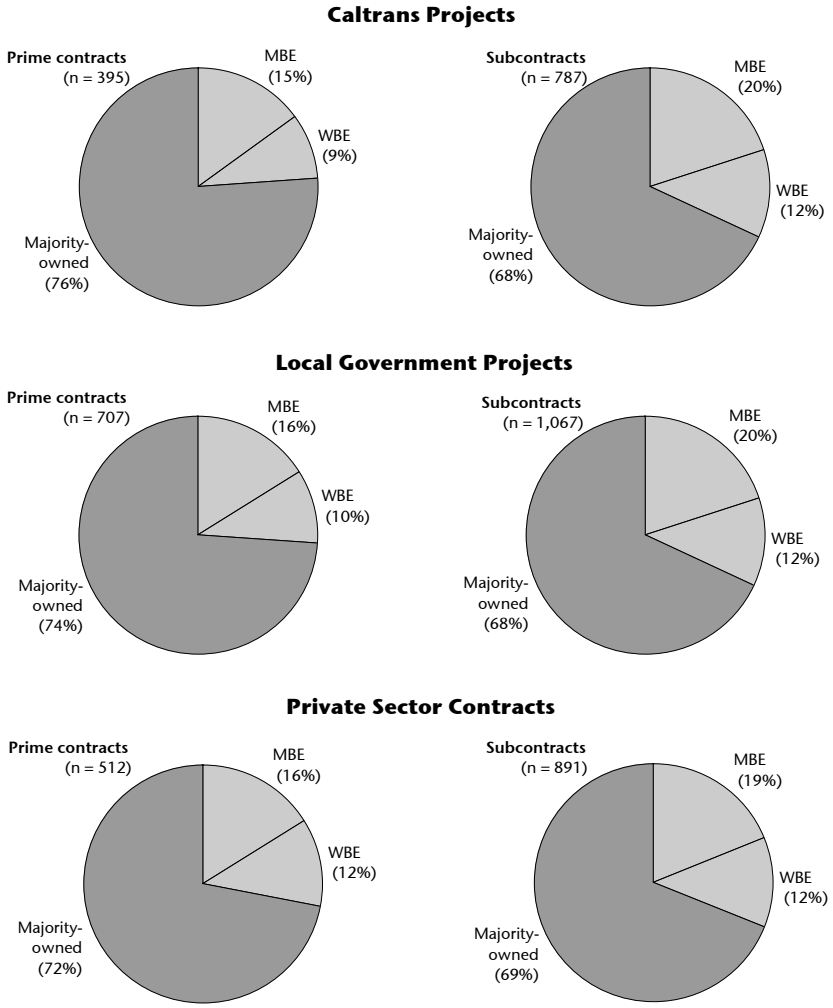
Source: BBC Research and Consulting from 2006 Availability Survey.

Summary of transportation construction firm competition for Caltrans, local agency and private sector work. The pie charts in Figure F-40 examine the relative share of all firms competing for Caltrans, local government and private sector prime contracts and subcontracts based on responses from firms in the 2006 Availability Survey.

Of the 395 transportation construction industry firms in the Availability Survey that reported bidding on Caltrans prime contracts in the past five years, 76 percent are majority-owned, 15 percent are MBEs and 9 percent are WBEs. The share of firms bidding as primes that are MBE/WBEs slightly increases for local government and private sector work.

Among the 787 firms in the Availability Survey competing for subcontracts, two-thirds of the firms are majority-owned. MBE/WBE share of firms bidding on this subcontract work varies little between Caltrans contracts, local government contracts and private sector contracts.

Figure F-40.
MBE and WBE share of transportation construction industry firms bidding on different types of work in California in the past 5 years



Note: WBE is white women-owned firms.

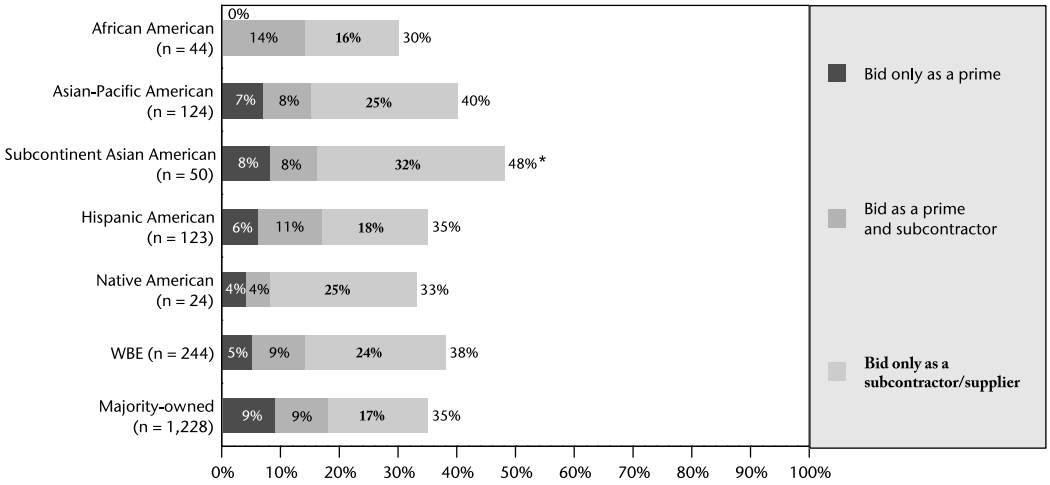
Source: BBC Research and Consulting from 2006 Availability Survey.

Transportation engineering industry firms' past bidding on Caltrans work. Transportation engineering industry firms are more likely to have bid on past Caltrans projects as a prime consultant or subconsultant than transportation construction industry firms. As shown in Figure F-41, among majority-owned firms, 35 percent had submitted proposals or proposed as a subconsultant on Caltrans projects in the past five years. About the same share of Hispanic American-owned and majority-owned transportation engineering industry firms had proposed as a prime or subconsultant on past Caltrans projects.

Preliminary results for WBEs were similar to majority-owned firms, except that WBEs were more likely to have bid as subconsultants (33 percent compared with 26 percent of majority-owned firms).

This pattern is evident for minority-owned firms as well. Most groups of firms were about as likely to have proposed on past Caltrans projects, but a greater proportion attempted to participate as a subconsultant.

Figure F-41.
Percent of available transportation engineering industry firms that reported submitting a bid for any part of a Caltrans project in the past 5 years



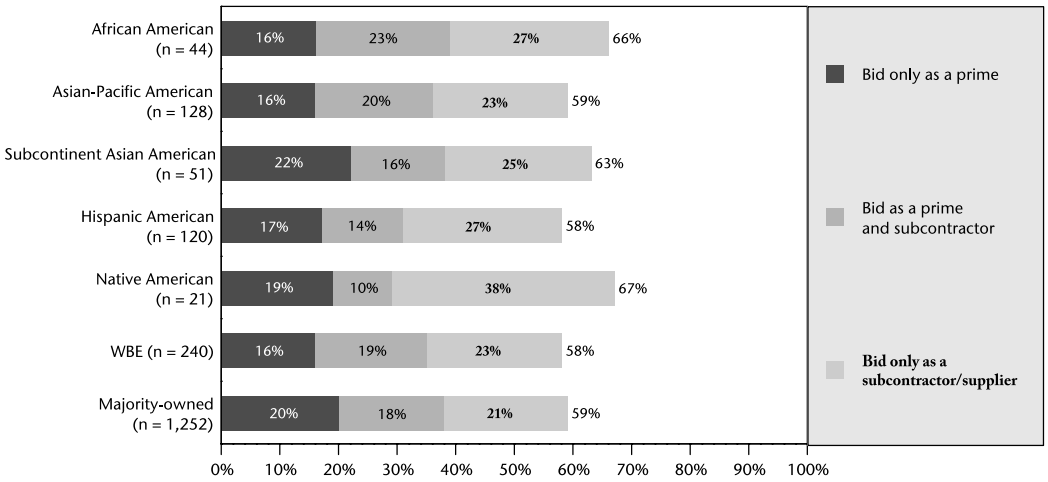
Note: WBE is white women-owned firms.
* Statistically significant at the 90% confidence level.

Source: BBC Research and Consulting from the 2006 Availability Survey.

Transportation engineering industry firms' past bidding on local government work. More than one-half of transportation engineering industry firms had proposed on prime contracts or subcontracts related to local government transportation projects in the past five years. Preliminary results presented in Figure F-42 indicate:

- Minority-owned firms were as or more likely to have proposed on local agency projects than majority-owned firms.
- A large portion of MBEs, WBEs and majority-owned firms had bid as prime consultants. Except for Hispanic American-owned firms and Native American-owned firms, MBE/WBEs were about as likely to have bid on local agency prime contracts as majority-owned firms.
- MBE/WBEs in general were more likely to have competed as subconsultants for past local agency work than majority-owned firms.

Figure F-42.
Percent of available transportation engineering industry firms that reported submitting a bid for any part of a local government project in the past 5 years



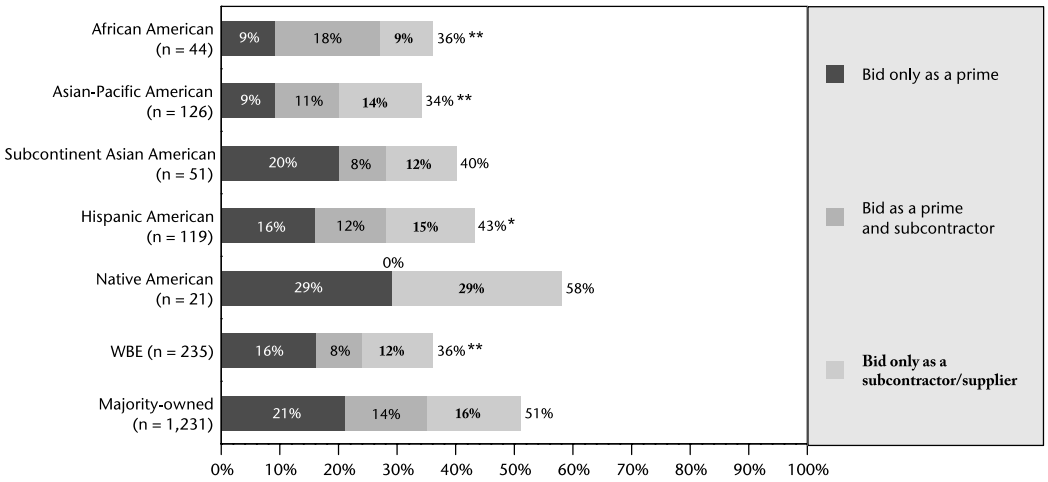
Note: WBE is white women-owned firms.
Source: BBC Research and Consulting from the 2006 Availability Survey.

Transportation engineering industry firms' past bidding on private sector work. One-half of majority-owned transportation engineering industry firms had proposed as prime or subconsultants on private sector work in the past five years. This was higher than MBEs and WBEs, except for Native American-owned firms:

- For most groups, MBEs were somewhat less likely as majority-owned firms to have bid as subconsultants.
- WBEs were far less likely to bid as subconsultants than majority-owned firms (20 percent versus 30 percent);
- Relatively fewer MBEs and WBEs had competed for private sector prime contracts compared with majority-owned firms (with the exception of native American-owned firms and firms owned by Subcontinent Asian Americans).

Figure F-43 examines this information.

Figure F-43.
Percent of available transportation engineering industry firms that reported submitting a bid for any part of a private sector project in the past 5 years



Note: WBE is white women-owned firms.
* Statistically significant at the 90% confidence level.
** Statistically significant at the 95% confidence level.

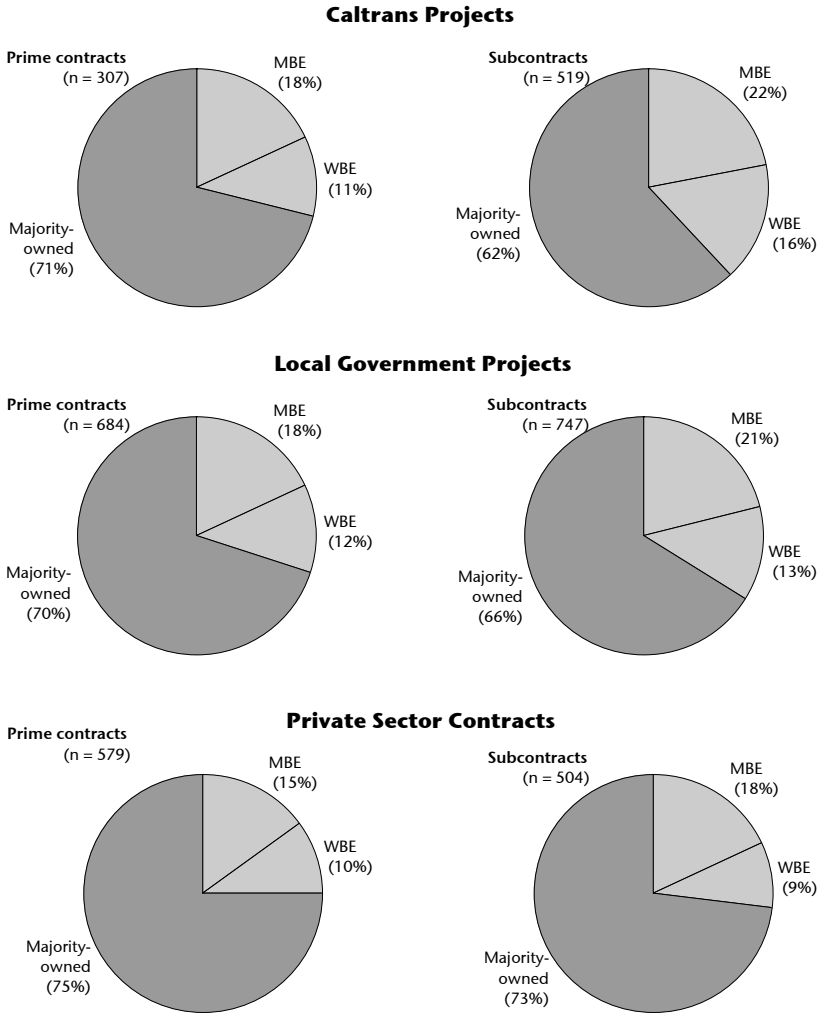
Source: BBC Research and Consulting from the 2006 Availability Survey.

Summary of transportation engineering firm competition for Caltrans, local agency and private sector work. As with transportation construction firms, the study team developed pie charts to analyze the relative share of engineering industry firms competing for Caltrans, local government and private sector prime contracts and subcontracts. These preliminary results are based on counts of firms reporting that they compete for each type of work in the 2006 Availability Survey.

As shown in Figure F-44, MBE/WBEs are a larger share of transportation engineering industry firms competing for public sector work than firms competing for private sector work (29 percent for the public sector versus 25 percent in the private sector).

MBE/WBEs comprised 38 percent of firms pursing Caltrans subcontracts, much more than MBE/WBE representation among firms seeking subcontracts in the private sector (27 percent).

Figure F-44.
MBEs and WBE share of transportation engineering industry firms proposing on different types of work in California in the past five years



Note: WBE is white women-owned firms.

Source: BBC Research and Consulting from 2006 Availability Survey.

Relative success of firms in pursuing Caltrans, local government and private sector work. Only a portion of the firms reporting bidding on different types of work were successful in obtaining that work. For example, two-thirds of majority-owned transportation construction industry firms that indicated bidding on Caltrans work reported being awarded some part of a Caltrans contract in the past five years. A greater share of majority-owned transportation construction firms that pursued local government work were successful in receiving that work (79 percent of bidders obtained a contract or subcontract). A similar percentage of majority-owned firms that bid on private sector work reported receiving such work.

These statistics for overall "bidding success rates" combine firms bidding as prime contractors, subcontractors, suppliers and truckers (and combines awards by type). Figures F-45, F-46 and F-47 compare success rates of minority-, women- and majority-owned firms in the transportation construction industry when pursuing Caltrans, local government and private sector work. Figures F-48, F-49 and F-50 examine preliminary results for the transportation engineering industry.

Caltrans transportation construction work. Figure F-45 examines the bidding success rates of transportation construction industry firms pursuing any part of a Caltrans contract. As shown, about two-thirds of Asian-Pacific American-, Native American- and majority-owned firms that reported bidding or submitting price quotes on Caltrans work (as primes, subs, suppliers, truckers) were successful in obtaining at least one contract or subcontract over the past five years.

In contrast, only 39 percent of African American-owned firms that bid on Caltrans work were successful in obtaining such work. WBEs had a lower success rate than majority-owned firms when pursuing Caltrans work. There were too few Subcontinent Asian American-owned firms among firms pursuing Caltrans work to include in the analysis.

Figure F-45.
Success rate of transportation construction firms bidding on Caltrans work

Note:

Success rate is the percentage of firms bidding on work in the past five years that received contracts or subcontract.

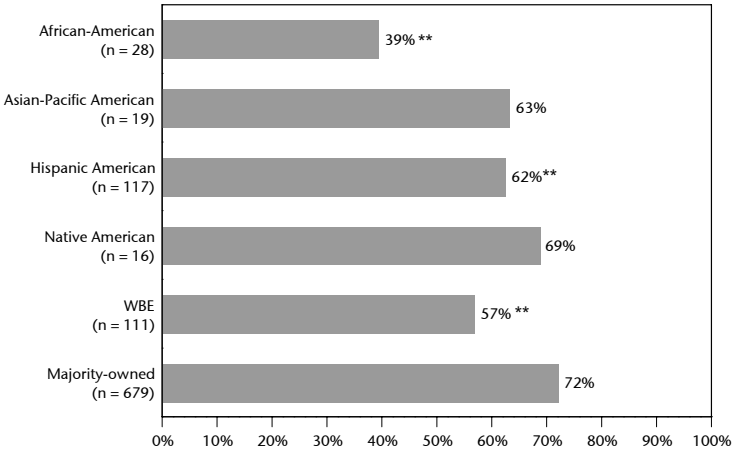
Too few Subcontinent Asian American-owned firms for analysis.

WBE is white women-owned firms.

** Statistically significant at the 95% confidence level.

Source:

BBC Research and Consulting from 2006 Availability Survey.



Local government transportation construction work. Nearly 80 percent of majority-owned transportation construction industry firms that had bid on any part of a local government contract were successful in obtaining at least one contract or subcontract. Bidding success rates were lower for African American- and Native American-owned firms.

Each group of transportation construction industry firms except for Native American-owned firms were more likely to have success in obtaining some local government work than Caltrans work (see Figure F-46).

Figure F-46.
Success rates of transportation construction firms bidding on local government work

Note:

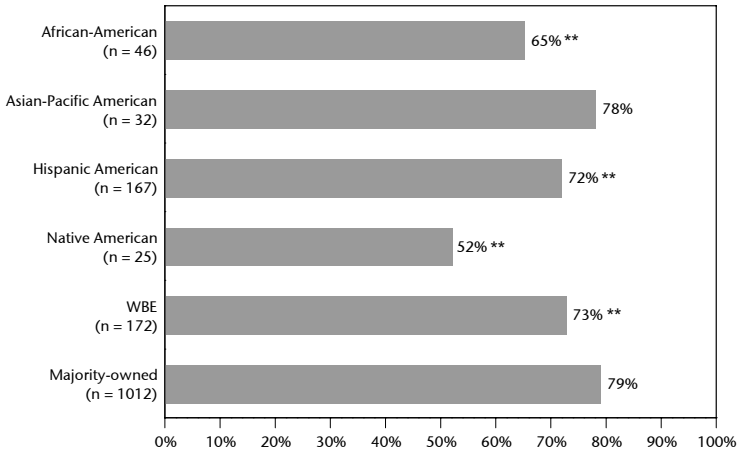
Too few Subcontinent Asian American-owned firms for analysis.

WBE is white women-owned firms.

** Statistically significant at the 95% confidence level.

Source:

BBC Research and Consulting from 2006 Availability Survey.



Private sector transportation construction work. As with local government work, 79 percent of majority-owned transportation construction industry firms that had bid on any private sector work (including subcontracts) were successfully in receiving some work from this sector. The success rate of WBEs was slightly lower.

MBEs pursuing private sector work were not as successful as majority-owned firms based on the survey responses:

- Only 44 percent of African American-owned transportation construction industry firms seeking bidding on private sector work had received contracts or subcontracts, a very large disparity. (This result is based on responses from 18 African American-owned firms that had sought private sector work.)
- About 70 percent of Hispanic American- and Native American-owned firms bidding on private sector work had obtain contracts or subcontracts.

These findings are summarized in Figure F-47.

Figure F-47. Success rate of transportation construction firms bidding on private sector work

Note:

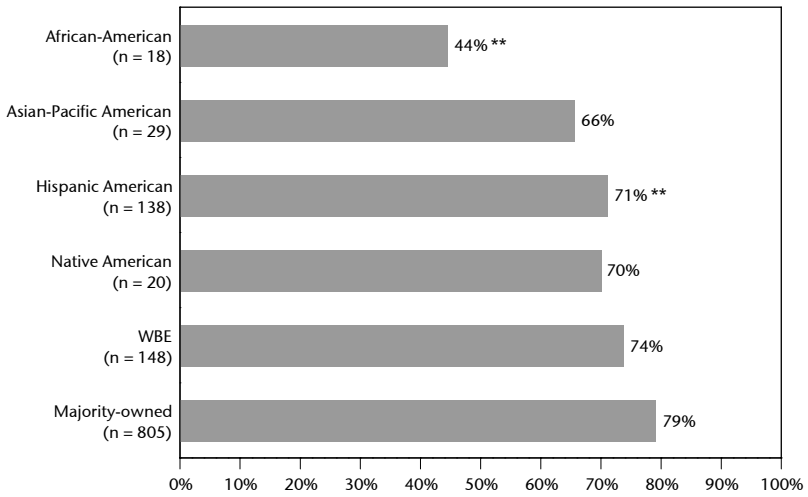
Too few Subcontinent Asian American-owned firms for analysis.

WBE is white women-owned firms.

** Statistically significant at the 95% confidence level.

Source:

BBC Research and Consulting from 2006 Availability Survey.



Caltrans transportation engineering work. The study team performed similar analyses for transportation engineering industry firms responding to the Availability Survey. (Note that there were too few Native American-owned engineering industry firms to include in the analysis.)

Figure F-48 examines the success rate of transportation engineering industry firms in obtaining Caltrans work as prime consultants or subconsultants. About 65 percent of majority-owned firms seeking Caltrans prime contracts or subcontracts were successful in obtaining some Caltrans work over the past five years. There were no substantial differences in success rates for MBEs and WBEs except for African American-owned firms responding to the survey, which had a higher rate of success pursuing Caltrans engineering work.

Figure F-48. Success rate of transportation engineering firms bidding on Caltrans work

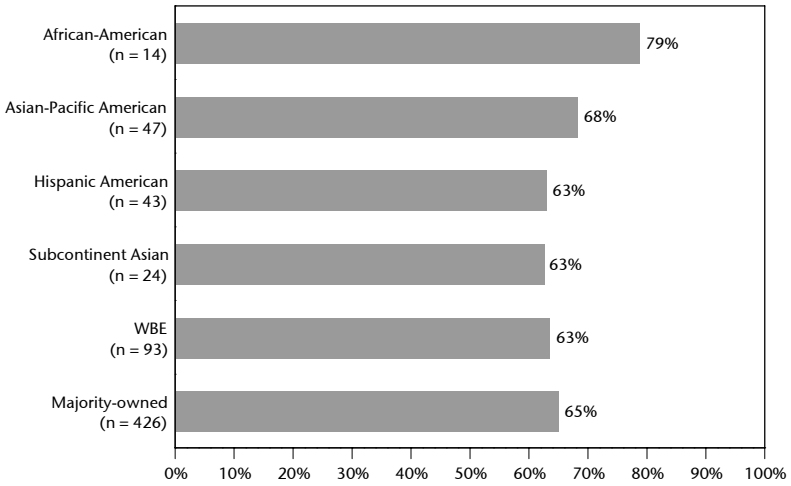
Note:

Too few Native American-owned firms for analysis.

WBE is white women-owned firms.

Source:

BBC Research and Consulting from 2006 Availability Survey.



Local government transportation construction work. Nearly 80 percent of majority-owned transportation engineering industry firms proposing as prime consultants or subconsultants on local government work were successful in obtaining work. This success rate is similar to WBEs, Asian-Pacific American-owned firms and Hispanic American-owned firms.

African American- and Subcontinent Asian American-owned firms had lower rates of success, but these lower rates are based on responses from relatively few firms.

As with transportation construction, each group of transportation engineering industry firms was more likely to have success in obtaining some local government work than Caltrans work. Figure F-49 presents information by group.

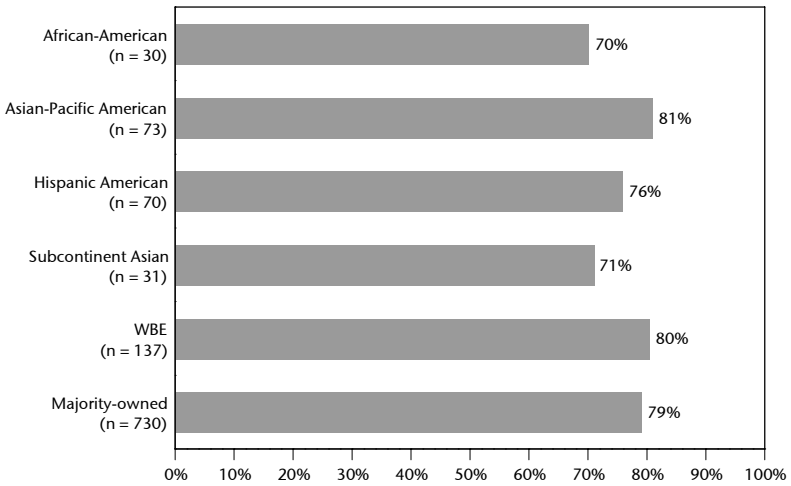
Figure F-49. Success rate of transportation engineering firms biding on local government work

Note:

WBE is white women-owned firms.

Source:

BBC Research and Consulting from 2006 Availability Survey.



Private sector transportation construction work. More than 80 percent of majority-owned transportation engineering industry firms that had bid on any private sector work (including subcontracts) were successful in receiving some work from this sector.

Relatively fewer African American-owned transportation engineering industry firms were successful when seeking this work (56 percent). This is a large disparity, but based on a relatively small number of African American-owned firms that had sought private sector work (16 firms). Most African American-owned engineering-related firms had not submitted proposals for private sector prime contracts or subcontracts.

As shown in Figure F-50, other minority-owned firms and WBEs that had proposed on private sector work were about as successful as majority-owned firms.

Figure F-50. Success rate of transportation engineering firms bidding on private sector work

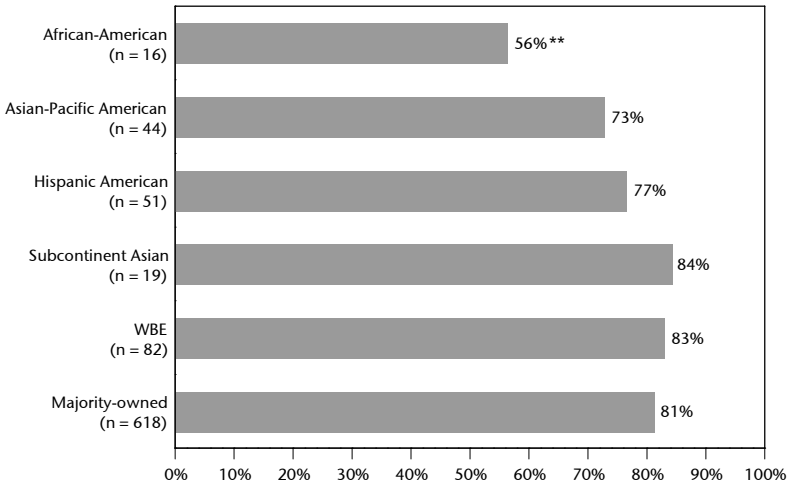
Note:

WBE is white women-owned firms.

** Statistically significant at the 95% confidence level.

Source:

BBC Research and Consulting from 2006 Availability Survey.



Summary

Certain groups of minority- and women-owned firms appear to have different market opportunities and business outcomes compared with majority-owned firms. Major findings include:

- Relatively few MBEs and WBEs in the transportation engineering industry compete for private sector contracts and subcontracts.
- A low share of African American-owned firms in the transportation construction and engineering industries that have bid on Caltrans and private sector work have been successful in obtaining work from these sectors.
- Relatively few MBE/WBEs in the transportation construction industry have been awarded large contracts or subcontracts (contracts or subcontracts of $5 million or more).
- Relatively few WBEs in the transportation engineering industry have been awarded large contracts or subcontracts ($5 million or more).
- African American-owned firms in California are more likely to close than other firms. In the United States, African American-owned construction firms are more likely to close than other construction firms. African Americans closing construction firms are more likely to do so because the firm is unsuccessful (national data).
- African Americans, Hispanic Americans and women who own construction firms have substantially lower earnings than other groups.

- African American-, Asian-Pacific American-, Subcontinent Asian American-, Hispanic American-, Native American- and white women-owned businesses in the transportation construction industry have lower annual revenue than majority-owned firms.

- In the transportation engineering industry, African American-, Asian-Pacific American-, Subcontinent Asian American-, Hispanic American-, Native American- and white women-owned businesses have lower annual revenue than majority-owned firms.

APPENDIX G.
Description of U.S. Census of Population Data

The study team utilized U.S. Census data from the 1980, 1990 and 2000 U.S. Census 5% Public Use Micro-samples (PUMS data) to analyze:

- Demographic characteristics of workers in construction and engineering, including related occupations;
- Educational attainment; and
- Self-employment (business ownership).

PUMS offers several features ideal to the analyses reported in this study, including historical cross-sectional data; stratified national and state-level samples; large sample sizes, even for subsets of the population (e.g., ethnic and occupational groups); and robust variables for statistically significant estimates.

BBC obtained selected Census data via the Minnesota Population Center's Integrated Public Use Micro-data Series (IPUMS). The IPUMS program provides access to customized, accurate data extracts. These data are available at the IPUMS web site.[1]

Data for 2000

The 2000 U.S. sample contains 14,081,466 observations. Applying the Census person-level population weights, this sample represents 281,421,906 people in the United States. The 2000 California sub-sample contains 1,690,642 individual observations, weighted to represent 33,884,660 people in the state.

Categorizing individual race/ethnicity. To define race/ethnicity for the 2000 Census data set, BBC used the IPUMS race variable with the greatest level of detail and categorized each race type into one of seven groups:

- Non-Hispanic white;
- Hispanic American;
- African-American;
- Asian-Pacific American;
- Subcontinent Asian American;
- Native American; and
- Other minority (unspecified)

[1] Steven Ruggles, Matthew Sobek, Trent Alexander, Catherine A. Fitch, Ronald Goeken, Patricia Kelly Hall, Miriam King, and Chad Ronnander. *Integrated Public Use Microdata Series: Version 3.0* [Machine-readable database]. Minneapolis, MN: Minnesota Population Center [producer and distributor], 2004. http://usa.ipums.org/usa/

An individual is considered "non-Hispanic white" if not Hispanic and not in combination with any other race group. Any self-identified Hispanic individuals are considered Hispanic American, regardless of any other race group identification.

For the five other race groups, an individual's race/ethnicity is categorized by the first (or only) race group identified in each possible race-type combination. BBC uses a rank ordering methodology which complements the 2000 Census data dictionary rank ordering. African-American is first, followed by Native American, then Asian-Pacific American and finally Subcontinent Asian American. For example, if an individual identified "Korean," this person belongs in the Asian-Pacific American category, whereas, if the individual identified "Korean" in combination with "Black," the individual is considered African-American. Hispanic identification overrules any other race group identification.

- The Asian-Pacific American category includes the following race/ethnic groups: Cambodian, Chamorro, Chinese, Filipino, Guamanian, Hmong, Indonesian, Japanese, Korean, Laotian, Malaysian, Samoan, Taiwanese, Thai, Tongan, and Vietnamese. This category also includes other Polynesian, Melanesian and Micronesian races as well as individuals identified as Pacific Islanders.
- The Subcontinent Asian American category includes these race groups: Asian Indian (Hindu), Bangladeshi, Pakistani, and Sri Lankan. Any individuals identified as "Asian," but not clearly categorized as Asian-Pacific versus Subcontinent Asian, are put into the Asian-Pacific group. (Overall, nine in ten Asians counted in the 2000 Census in California were Asian-Pacific Americans.)
- American Indian, Alaskan Native, Hawaiian and Latin American Indian groups are considered Native American.
- If an individual is identified with any of the above groups and an "other race" group, the individual is categorized into the known category. Individuals identified as "Other race" or "White and other race" are categorized as "Other minority."

The exception to the rules listed above applies to individuals who are Asian-Pacific American in combination with Hawaiian. An individual identified as Hawaiian alone is considered Native American. Individuals who are a combination of Native American and Asian-Pacific are considered Native American in all cases except those identified as Hawaiian Native Americans. These individuals are considered primarily Asian-Pacific.

Business ownership. BBC uses the Census "class of worker" variable (CLASSWKD) to determine self-employment. Individuals are classified into eight categories:

- Self-employed for a non-incorporated business;
- Self-employed for an incorporated business;
- Wage or salary employee for a private firm;
- Wage or salary employee for a non-profit organization;
- Employee of the Federal government;
- Employee of a State government;
- Employee of a local government; or
- Unpaid family worker.

BBC included as business owners individuals who reported self-employment, either for an incorporated or a non-incorporated business.

Defining selected industry sectors. The construction sector is defined using the 2000 Census code for the industry, 077, which is equivalent to the 1997 NAICS code 23. The Architectural, Engineering and Related Services industry is Census code 729, corresponding to 1997 NAICS code 5413.

Relevant engineering occupational titles. When referring to engineering as an occupation, BBC included civil (136), environmental (142), mining and geological engineers (150). The Census codes for these occupational titles (in parentheses) tie to Standard Occupational Classification (SOC) codes 17-2051, 17-2081 and 17-2151, respectively.

Education variables. BBC used the variable denoting the highest level of educational attainment to classify individuals into the following four categories: less than high school, high school diploma, some college and at least a bachelor's degree.

Definition of workers. The universe for the class of worker, industry and occupation variables includes individuals over the age of 16 who reported last working within the five years preceding the Census survey.

Comparisons Over Time

BBC utilized IPUMS data from the 1980, 1990 and 2000 Censuses to analyze changes in worker demographics, educational attainment and business ownership over time.

Changes in race/ethnicity categories between censuses. Figure G-1 lists the seven BBC-defined race/ethnic categories with the corresponding 2000, 1990 and 1980 Census race groups. The comparability of specific race/ethnic categories is relatively straightforward between 1980 and 1990. However, the U.S. Bureau of the Census introduced a combination of race types in 2000. Individuals could select multiple races when responding to the 2000 Census questionnaire.

For example, an individual who is primarily white, yet with one quarter of Native American ancestry, could choose the "White and American Indian/Alaska Native" race group in 2000. However, if the same individual must choose a single race, as in prior years, the choice may either be "white" or "American Indian/Alaska Native." The choice depends on unknowable factors including how strongly the individual identifies with his or her Native heritage. In addition, the data analyst does not have information about the proportions of individual ancestry, and will only know that the ancestry is mixed. The variability introduced by allowing multiple race selection complicates direct comparisons between race data from the 2000 Census and previous censuses. Even so, 98 percent of survey respondents in 2000 indicated a single race.[2]

[2] Grieco, Elizabeth M. & Rachel C. Cassidy. "Overview of Race and Hispanic Origin," *Census 2000 Brief*, March 2001, page 3.

Figure G-1.
BBC race/ethnic categories compared with
Census race and Hispanic Origin survey questions, 1980-2000

			1980 Census
African-American	**Hispanic origin:** no **Race:** Black/Negro alone or in combination with any other non-Hispanic group	**Hispanic origin:** no **Race:** Black/Negro	**Hispanic origin:** no **Race:** Black/Negro
Asian-Pacific American	**Hispanic origin:** no **Race:** Chinese, Taiwanese, Japanese, Filipino, Korean, Vietnamese, Cambodian, Hmong, Laotian, Thai, Indonesian, Malaysian, Samoan, Tongan, Polynesian, Guamanian/Chamorro, Pacific Islander, Micronesian, Melanesian, or other Asian, either alone or in combination with any non-Hispanic, non-Black, or non-Native American groups. *Does include Asian-Pacific in combination with Hawaiian.*	**Hispanic origin:** no **Race:** Chinese, Taiwanese, Japanese, Filipino, Korean, Vietnamese, Cambodian, Hmong, Laotian, Thai, Burmese, Indonesian, Malaysian, Okinawan, Samoan, Tahitian, Tongan, Guamanian/Chamorro, Northern Mariana Islander, Palauan, Fijian, Pacific Islander, Micronesian, Melanesian, other Polynesian, or other Asian	**Hispanic origin:** no **Race:** Chinese, Japanese, Filipino, Korean, Vietnamese, Pacific Islander or other Asian
Subcontinent Asian American	**Hispanic origin:** no **Race:** Asian Indian, Bangladeshi, Pakistani or Sri Lankan, alone or in combination with white or other groups only	**Hispanic origin:** no **Race:** Asian Indian, Bangladeshi, Pakistani or Sri Lankan	**Hispanic origin:** no **Race:** Asian Indian
Hispanic American	**Hispanic origin:** yes **Race:** any race groups, alone or in combination with other groups	**Hispanic origin:** yes **Race:** any	**Hispanic origin:** yes **Race:** any, - OR - **Hispanic origin: no** **Race:** Spanish
Native American	**Hispanic origin:** no **Race:** American Indian or Alaskan Native tribe identified, or Hawaiian, alone or in combination with any non-Hispanic, non-Black group. *Does not include Asian-Pacific in combination with Hawaiian.*	**Hispanic origin:** no **Race:** American Indian or Alaskan Native tribe identified, or Hawaiian	**Hispanic origin:** no **Race:** American Indian/Alaska Native or Hawaiian
Other minority group	**Hispanic origin:** no **Race:** other race alone or in combination with white only	**Hispanic origin:** no **Race:** other race	**Hispanic origin:** no **Race:** other race
Non-Hispanic white	**Hispanic origin:** no **Race:** white alone	**Hispanic origin:** no **Race:** white	**Hispanic origin:** no **Race:** white

Source: BBC Research and Consulting from the IPUMS program: http://usa.ipums.org/usa/.

Although there are fewer race types in the 1980 data, the 1990 race types can be placed into 1980 categories. However, by using two categories of Asian individuals, BBC loses some accuracy when comparing Asian individuals between 1980 and 1990: individuals identified as Bangladeshi, Pakistani and Sri Lankan are categorized as "Subcontinent Asian American" in 1990, yet these race groups are not included in 1980. In 1980, the same individuals would be included in the "Other Asian" race type, and therefore categorized by BBC as "Asian-Pacific American." Together, these three groups accounted for 0.04 percent of the 1990 sample.

Business ownership. BBC uses the Census "class of worker" variable (CLASSWKD) to determine self-employment. This variable is the same for 1980, 1990 and 2000.

Changes in industry codes between censuses. The Construction sector is coded as "077" in the 2000 Census, and "060" in the 1990 and 1980 Censuses. The 2000 Census includes the "Architectural, Engineering and Related Services" industry as code "729." In 1980 and 1990, the code is "882" for "Engineering, Architectural and Surveying Services."

Changes in occupational codes between censuses. Occupational titles and codes vary between censuses. BBC makes the following adjustments:

- **Codes used to determine the occupational (versus industry) category of engineer.** The 1980 and 1990 Censuses do not include specific categories for environmental or geological engineers, so these are omitted when comparing populations over time by engineering occupation. Instead, BBC focuses on civil engineers, coded as "136" in 2000, or "53" in 1980 and 1990.
- **Codes used to determine occupations within the construction industry.** Figure G-2 contains the occupational code crosswalk and all job descriptions.

Changes in educational variables between censuses. The 1990 and 2000 Censuses provide the same educational attainment variables, which denote the highest degree achieved, but the 1980 Census uses a highest-grade completed variable. In order to compare educational attainment from 1980 to 1990 or 2000, BBC made the following assumptions:

- An individual who has not completed 12th grade or a GED has less than a high school diploma.
- An individual who completed 12th grade is considered a high school graduate.
- An individual who completed at least 12th grade, but less than completion of four years of college is categorized under "some college."
- An individual who completed at least four years of college is categorized as receiving at least a bachelor's degree.

Figure G-2.
Occupational crosswalk for 1980 and 2000 IPUMS data

	Census 1980 Occupational title and code	Job description for 2000 titles
Construction laborers 626	Construction laborers 869	Perform tasks involving physical labor at building, highway, and heavy construction projects, tunnel and shaft excavations, and demolition sites. May operate hand and power tools of all types: air hammers, earth tampers, cement mixers, small mechanical hoists, surveying and measuring equipment, and a variety of other equipment and instruments. May clean and prepare sites, dig trenches, set braces to support the sides of excavations, erect scaffolding, clean up rubble and debris, and remove asbestos, lead, and other hazardous waste materials. May assist other craft workers. Exclude construction laborers who primarily assist a particular craft worker, and classify them under "Helpers, Construction Trades."
Cement masons, concrete finishers and terrazzo workers 625	Concrete and terrazzo finishers 588	Smooth and finish surfaces of poured concrete, such as floors, walks, sidewalks, or curbs using a variety of hand and power tools. Align forms for sidewalks, curbs or gutters; patch voids; use saws to cut expansion joints. Terrazzo workers apply a mixture of cement, sand, pigment or marble chips to floors, stairways, and cabinet fixtures.
Iron and steel workers, including reinforcing iron and rebar workers 653	Structural metal workers 597	*Iron and steel workers* raise, place, and unite iron or steel girders, columns, and other structural members to form completed structures or structural frameworks. May erect metal storage tanks and assemble prefabricated metal buildings. *Reinforcing iron and rebar workers* position and secure steel bars or mesh in concrete forms in order to reinforce concrete. Use a variety of fasteners, rod-bending machines, blowtorches, and hand tools. Include rod busters.
Electricians 635	Electricians and apprentices 575 & 576	Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes. May install or service street lights, intercom systems, or electrical control systems. Exclude "Security and Fire Alarm Systems Installers." The 2000 category includes electrician apprentices.
Paving, surfacing and tamping equipment operators 630	Paving, surfacing and tamping equipment operators 594	Operate equipment used for applying concrete, asphalt, or other materials to road beds, parking lots, or airport runways and taxiways, or equipment used for tamping gravel, dirt, or other materials. Include concrete and asphalt paving machine operators, form tampers, tamping machine operators, and stone spreader operators.
Miscellaneous construction equipment operators, including pile-driver operators 632	Grader, dozer and scraper operators 855	Operate one or several types of power construction equipment, such as motor graders, bulldozers, scrapers, compressors, pumps, derricks, shovels, tractors, or front-end loaders to excavate, move, and grade earth, erect structures, or pour concrete or other hard surface pavement. Operate pile drivers mounted on skids, barges, crawler treads, or locomotive cranes to drive pilings for retaining walls, bulkheads, and foundations of structures, such as buildings, bridges, and piers.

Figure G-2. (continued)
Occupational crosswalk for 1980 and 2000 IPUMS data

	Census 1980 Occupational title and code	Job description for 2000 titles
Driver/sales workers and truck drivers 913	Truck drivers (heavy), truck drivers (light) and driver-sales workers 804, 805 & 806	*Driver/sales workers* drive trucks or other vehicles over established routes or within an established territory and sell goods, such as food products, including restaurant take-out items, or pick up and deliver items, such as laundry. May also take orders and collect payments. Include newspaper delivery drivers. *Truck drivers (heavy)* drive a tractor-trailer combination or a truck with a capacity of at least 26,000 GVW, to transport and deliver goods, livestock, or materials in liquid, loose, or packaged form. May be required to unload truck. May require use of automated routing equipment. Requires commercial drivers' license. *Truck drivers (light)* drive a truck or van with a capacity of under 26,000 GVW, primarily to deliver or pick up merchandise or to deliver packages within a specified area. May require use of automatic routing or location software. May load and unload truck. Exclude "Couriers and Messengers."
Crane and tower operators 951	Crane and tower operators 849	Operate mechanical boom and cable or tower and cable equipment to lift and move materials, machines, or products in many directions. Exclude "Excavating and Loading Machine and Dragline Operators."
Dredge, excavating and loading machine operators 952	Excavating and loading machine operators 853	*Dredge operators* operate dredge to remove sand, gravel, or other materials from lakes, rivers, or streams; and to excavate and maintain navigable channels in waterways. *Excavating and loading machine, and dragline operators* Operate or tend machinery equipped with scoops, shovels, or buckets, to excavate and load loose materials. *Loading machine operators, underground mining*, Operate underground loading machine to load coal, ore, or rock into shuttle or mine car or onto conveyors. Loading equipment may include power shovels, hoisting engines equipped with cable-drawn scraper or scoop, or machines equipped with gathering arms and conveyor.
First-line supervisors/managers of construction trades and extraction workers 620	Supervisors (categories separated): brickmasons, stonemasons, and tile setters; carpenters and related workers; electricians and power transmission installers; painters, paperhangers and plasterers; plumbers, pipefitters and steamfitters; n.e.c.; and extractive occupations 553-558 & 613	Directly supervise and coordinate the activities of construction or extraction workers.

Figure G-2. (continued)
Occupational crosswalk for 1980 and 2000 IPUMS data

	Census 1980 Occupational title and code	Job description for 2000 titles
Construction managers 22	Managers and administrators, n.e.c 19	Plan, direct, coordinate, or budget, usually through subordinate supervisory personnel, activities concerned with the construction and maintenance of structures, facilities, and systems. Participate in the conceptual development of a construction project and oversee its organization, scheduling, and implementation. Include specialized construction fields, such as carpentry or plumbing. Include general superintendents, project managers, and constructors who manage, coordinate, and supervise the construction process.

Note: All occupational groups include only individuals who work in the construction industry. By definition, this includes workers over the age of 16 who reported last working within five years of the Census survey.

Source: 2000 Census occupational titles and codes at http://usa.ipums.org/usa/volii/00occup.shtml, 1980 codes and titles at http://usa.ipums.org/usa/volii/98occup.shtml, job descriptions from the Bureau of Labor Statistics www.bls.gov.

APPENDIX H.
Regression Analysis

In Section III and Appendix F, the study team noted that there were statistically significant disparities for some minority groups (and non-Hispanic, white women) in rates of business ownership, earnings of business owners, and frequency of business loan denials. BBC considered the possibility that neutral factors, such as age, education, access to capital and creditworthiness (among others) might account for at least a portion of these disparities. The study team further investigated these issues through multivariate regression analyses. This appendix documents the regression analysis.

In the comparison of availability versus utilization of minority and women-owned firms for the disparity analysis, the study team only considers firms to be available for a potential project if they had previously bid on (or been awarded) a project of similar size. If, however, there are significant disparities in "bid capacity" based on minority or female firm ownership, the study team's approach might underestimate the availability of minority and women-owned firms in the disparity analysis (and perhaps not find disparities when more comprehensive analysis would reveal them). This appendix also further investigates potential disparities in bid capacity for minority and women-owned firms.

Business Ownership

As discussed in Appendix F, there is an extensive literature on the determinants of business ownership. Prior studies have found that neutral factors such as access to financial capital, education, age, family characteristics (e.g. marital status) and other factors can help explain rates of self-employment.

This issue has also been examined in other disparity studies. Prior studies in Minnesota[1] and Illinois[2] have conducted econometric analyses to investigate whether or not disparities in business ownership among race, ethnic and gender groups in the combined construction and engineering industry remain after controlling for neutral factors. These studies have incorporated probit econometric models using data from the 2000 Census Public Use Microdata Sample (2000 PUMS). These studies have been among the materials submitted to the courts in subsequent litigation concerning states' implementation of the Federal DBE Program.

To further examine potential disparities in the rates of business ownership among employees in the California construction and engineering industries, the study team developed a probit model using 2000 PUMS data for California residents employed in these industries. The PUMS data is a 5 percent sample of U.S. households and the Census Bureau assigns a weight to each observation so that the weighted sample is representative of the population as a whole.

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[1] National Economic Research Associates, Inc. 2000. *Disadvantaged Business Enterprise Availability Study*. Prepared for the Minnesota Department of Transportation.

[2] National Economic Research Associates, Inc. 2004. *Disadvantaged Business Enterprise Availability Study*. Prepared for the Illinois Department of Transportation.

BBC used a probit model functional form for the regression analysis, consistent with other research. The probit model of business ownership in California includes more than 52,000 individuals working in the construction and engineering industries. The dependent variable is binary – coded as a "1" for individuals who are self-employed and a "0" for individuals who are not self-employed. The model estimates the probabilities of being a business owner among workers in the industry. The study team excluded observations where the Census Bureau had imputed self-employment (the dependent variable).

The extensive literature on business ownership explains the theoretical basis for business ownership regression models. BBC developed a model specification based on models developed by past researchers at the national level or in other states. Independent variables include:

- Personal characteristics potentially linked to the likelihood of business ownership (age, age-squared, marital status, number of children and elderly people in the household, ability to speak English and disability status);
- Variables to control for differences in educational attainment;
- Measures and indicators related to personal financial resources and constraints (home ownership, home value, monthly mortgage payment, dividend and interest income and additional household income from a spouse or unmarried partner); and
- Variables to indicate the race, ethnicity and gender of the individual.

The specification of this model is very similar to models used in other studies previously reviewed by the courts.

Results for the California transportation and engineering industries. Figure H-1 presents the coefficients and t-statistics for the initial probit model, which combines individuals working in both the construction and engineering industries. The model indicates that several of the neutral factors are statistically significant in predicting the probability of business ownership;

- Older individuals are more likely to be business owners, but this marginal effect declines for the oldest individuals;
- Interest and dividend income is positively correlated with being a business owner;
- Individuals who speak English "very well" are more likely to be business owners;
- Having some college, but not necessarily a four year college degree, increases the likelihood of being a business owner;
- Having an advanced degree reduces the likelihood of being a business owner;
- Income of a spouse or partner increases the likelihood of a person being a business owner; and
- The combination of the negative coefficient on the binary indicator of home ownership and the positive coefficient on the value of the home imply that homeownership only begins to increase the likelihood of business ownership for individuals with homes valued above approximately $150,000.

The effects of these neutral factors are generally consistent with previous research on business ownership and entrepreneurship. Even after controlling for the neutral factors that can be identified based on the PUMS data, statistically significant disparities in rates of business ownership remain for African Americans, Asian Pacific Americans, Subcontinent Asian Americans, Hispanic Americans and women.

Figure H-1.
California Combined Construction and Engineering Business Ownership Probit Model

Variable	Coefficient	t-statistic
Constant	-3.041131	-28.82 **
Age	0.089546	17.48 **
Age-squared	-0.000784	-12.85 **
Married	0.006204	0.32
Disabled	-0.017051	-0.76
Own children younger than 10	0.003853	0.55
Number of people over 65 in HH	-0.004007	-0.05
Own home	-0.102716	-4.60 **
Home value ($000s)	0.000001	14.38 **
Monthly mortgage payment	0.000025	1.67 *
Interest and dividend income ($000s)	0.000002	3.65 **
Income of spouse or partner ($000s)	0.000001	2.24 *
Speaks English very well	-0.030202	-1.14
Less than high school education	-0.024449	-1.03
Some college	0.115799	6.00 **
Four year degree	0.095091	3.25 **
Advanced degree	-0.034981	-0.72
African American	-0.324188	-6.56 **
Asian Pacific American	-0.004323	-0.11
Subcontinent Asian American	-0.457124	-2.79 **
Hispanic American	-0.288456	-12.20 **
Native American	-0.081738	-1.42
Other minority group	0.074456	0.98
Female	-0.415492	-15.00 **

Note: *Significant at 90% confidence level.
**Significant at 95% confidence level.
Source BBC Research & Consulting based on analysis of 2000 Census Public Use Microdata Sample.

Results specific to the construction industry. It is possible that the influence of neutral factors, and perhaps race and gender, on self-employment in the construction industry differ from those in the engineering industry. To examine this possibility the study team developed separate models by industry.

Figure H-2 presents the results of the probit model of self-employment in the California construction industry.

Figure H-2.
California Construction Business Ownership Probit Model

Variable	Coefficient	t-statistic
Constant	-3.58177	-9.67 **
Age	0.086555	5.27 **
Age-squared	-0.000645	-3.48 **
Married	-0.014554	-0.27
Disabled	0.053411	0.70
Own children younger than 10	0.011743	0.56
Number of people over 65 in HH	0.120283	0.81
Own home	-0.254078	-3.85 **
Home value ($000s)	0.000001	6.86 **
Monthly mortgage payment	0.000014	-0.47
Interest and dividend income ($000s)	0.000002	1.76 *
Income of spouse or partner ($000s)	0.0000001	2.55 *
Speaks English very well	-0.069579	-0.80
Less than high school education	-0.053793	-0.32
Some college	0.046507	0.50
Four year degree	0.256621	2.83 **
Advanced degree	0.230272	2.41 *
African American	-0.486443	-2.92 **
Asian Pacific American	-0.266160	-4.04 **
Subcontinent Asian American	-0.180251	-1.02
Hispanic American	-0.078585	-0.99
Native American	0.491396	2.61 **
Other minority group	0.262255	1.51
Female	-0.257010	-5.07 **

Note: *Significant at 90% confidence level.
**Significant at 95% confidence level.
Source: BBC Research & Consulting based on analysis of 2000 Census Public Use Microdata Sample.

Results of the construction industry only model are generally similar to the model for the combined industries, with the following exceptions:

- Speaking English "very well" is not a significant factor in self-employment in the construction industry;
- Completing either some college or a four year degree significantly increases the likelihood of being a business owner in construction; and
- There is not a significant disparity in the rate of construction business ownership among Asian Pacific Americans in the construction industry after accounting for neutral factors.

The construction business ownership model continues to indicate significant disparities in the rate of business ownership for African Americans, Subcontinent Asian Americans, Hispanic Americans and women after accounting for neutral factors identifiable from the 2000 PUMS data.

The probit modeling approach can then be used to estimate how many business owners there would be among each minority group with significant disparities in self-employment rates if they had the same probability of business ownership as similarly situated non-Hispanic white males. To conduct this next step in the analysis, BBC re-estimated the probit business ownership model for the construction industry based on only the non-Hispanic white males in the PUMS dataset.[3] The study team then applied the coefficients from this version of the model to the characteristics of the minority and female individuals in the dataset to calculate the probability of business ownership in the absence of race, ethnicity and gender-related effects. Figure H-3 depicts these simulated business ownership rates and compares them to the actual, observed mean probability of business ownership for each statistically significant group from the PUMS data. This simulation approach has also been incorporated in other disparity studies reviewed by the courts.

Figure H-3.
Comparison of Actual Construction Business Ownership Rates to Simulated Rates Under Non-Hispanic, White Male Business Environment for Groups Experiencing Significant Disparities

Group	Self-employment Rates		Disparity index (100 = parity)
	Actual	Benchmark	
African American	14.5%	23.7%	61
Subcontinent Asian American	16.0%	30.7%	52
Hispanic American	12.1%	22.6%	53
Females	14.8%	27.3%	54

Source: BBC Research & Consulting from statistical models of 2000 Census of Population data.

These results suggest that there are only 61 percent as many African American owned construction businesses in California as one would anticipate if African Americans working in the industry owned businesses at the same rate as similarly situated non-Hispanic, white males. The disparities are somewhat larger for Subcontinent Asian Americans, Hispanic Americans and women.

[3] This version of the model excludes the race, ethnicity and gender indicator variables since the value for all of those variables would be zero.

Results specific to the engineering industry. The study team also estimated a probit business ownership model for the California engineering industry. Figure H-4 presents the results of this model.

Figure H-4.
California Engineering Business Ownership Probit Model

Variable	Coefficient	t-statistic
Constant	-3.03479	-30.26 **
Age	0.089098	18.41 **
Age-squared	-0.000768	-13.41 **
Married	-0.000418	-0.02
Disabled	-0.006170	-0.29
Own children younger than 10	0.007628	1.16
Number of people over 65 in HH	0.015675	0.23
Own home	-0.107322	-5.13 **
Home value ($000s)	0.000001	15.78 **
Monthly mortgage payment	0.000014	1.03
Interest and dividend income ($000s)	0.000002	4.30 **
Income of spouse or partner ($000s)	0.000001	2.80 **
Speaks English very well	-0.050141	-1.98 *
Less than high school education	-0.029736	-1.27
Some college	0.079236	4.24 **
Four year degree	-0.021547	-0.86
Advanced degree	-0.173040	-4.98 **
African American	-0.340434	-7.23 **
Asian Pacific American	-0.127010	-3.90 **
Subcontinent Asian American	-0.354839	-2.93 **
Hispanic American	-0.282162	-12.46 **
Native American	-0.035647	-0.65
Other minority group	0.095299	1.37
Female	-0.429396	-18.01 **

Note: *Significant at 90% confidence level.
**Significant at 95% confidence level.
Source: BBC Research & Consulting based on analysis of 2000 Census Public Use Microdata Sample.

Many of the neutral factors associated with being a business owner in the engineering industry are similar to those in the construction industry, with some differences. In the engineering industry, more education is required to significantly increase the likelihood of being a business owner than in the construction industry. The combination of the negative coefficient on the binary indicator of home -ownership and the positive coefficient on the value of the home imply that homeownership only begins to increase the likelihood of business ownership in the engineering industry for individuals with homes valued above approximately $250,000.

The engineering business ownership model continues to indicate significant disparities in the rate of business ownership for African Americans, Asian Pacific Americans and women after accounting for neutral factors identifiable from the 2000 PUMS data. Disparities for Hispanic Americans and Subcontinent Asian Americans are not statistically significant. Native Americans working in this industry are more likely than non-Hispanic whites to own businesses.

The study team simulated engineering business ownership rates for these groups if they faced the same marked environment as white males. Figure H-5 depicts these simulated business ownership rates and compares them to the actual, observed mean probability of engineering business ownership for each statistically significant group.

Figure H-5.
Comparison of Actual Engineering Business Ownership Rates to Simulated Rates Under Non-Hispanic, White Male Business Environment for Groups Experiencing Significant Disparities

Group	Self-employment Rates		Disparity index (100 = parity)
	Actual	Benchmark	
African American	6.0%	14.8%	40
Asian-Pacific American	10.2%	15.2%	67
Native American	23.2%	13.6%	171
Females	9.4%	14.7%	64

Source: BBC Research & Consulting from statistical models of 2000 Census of Population data.

These results suggest that the disparity in engineering business ownership among African Americans is even larger than in the construction industry. The disparity in female ownership of engineering firms is less than found in the construction industry.

Business Earnings

Appendix F includes analysis of business earnings for business owners in the construction and engineering industries in California. Differences in business owner earnings may be at least partially accounted for by race- and gender-neutral factors such as age.

The study team applied regression analysis to the 2000 PUMS data to examine whether disparities in business earnings remained after controlling for neutral factors. Consistent with past court-reviewed research, BBC applied an ordinary least squares regression. The OLS model of construction and engineering business owner earnings in California included 7,546 observations.

Consistent with the model specifications that have been reviewed by the courts, the dependent variable in this model is the natural log of business earnings. Business owners reporting zero or negative business earnings were excluded, as were observations where the Census Bureau had imputed the amount of business earnings. Apart from variables indicating the race, ethnicity and gender of the business owner, the model also contained the available measures from the PUMS data considered likely to affect earnings potential – including age, age-squared, marital status, ability to speak English very well, disability condition and educational attainment. This model is very similar to models reviewed by the courts after other recent disparity studies.[4]

[4] For example, National Economic Research Associates, Inc. 2000. *Disadvantaged Business Enterprise Availability Study*. Prepared for the Minnesota Department of Transportation; and National Economic Research Associates, Inc. 2004. *Disadvantaged Business Enterprise Availability Study*. Prepared for the Illinois Department of Transportation.

Results for the California construction and engineering industries. Figure H-6 depicts the results of the OLS model for the combined construction and engineering industries (past studies reviewed by the courts have combined construction and engineering). The model indicates that several of the neutral factors are statistically significant in predicting earnings of business owners in the California construction and engineering industries:

- Older business owners have greater earnings, but this marginal effect declines for the oldest individuals;
- Owners who are married tend to have greater business earnings; and
- Business owners with less than a high school degree tend to have lower business earnings.

After accounting for neutral factors, there are statistically significant disparities for African American and Hispanic American business owners as well as women.

Figure H-6.
California Combined Construction and Engineering Business Owner Earnings Model

Variable	Coefficient	t-statistic
Constant	6.671328	23.22 **
Age	0.134376	10.21 **
Age-squared	-0.001459	-9.80 **
Married	0.409922	10.45 **
Speak English Very Well	0.050617	0.89
Disabled	-0.002063	-0.04
Less than HS	-0.245781	-4.28 **
Some College	-0.008317	-0.18
Four Year Degree	0.035475	0.58
Advanced Degree	0.017928	0.19
African American	-0.472129	-2.80 **
Asian Pacific American	-0.075027	-1.00
Subcontinent Asian American	0.340119	1.41
Hispanic American	-0.211683	-3.83 **
Native American	-0.172427	-1.05
Other Minority Group	0.426328	2.98 **
Female	-0.618914	-8.16 **

Note: *Significant at 90% confidence level.
**Significant at 95% confidence level.

Source: BBC Research & Consulting, 2007 based on analysis of 2000 Census Public Use Microdata Sample.

Business owner earnings results specific to the construction industry. The study team recognized that the influences on business owner earnings might differ between construction firms and engineering firms. Figure H-7 presents the results of the OLS model of business owner earnings specific to the California construction industry.

Figure H-7.
California Construction Business Owner Earnings Model

Variable	Coefficient	t-statistic
Constant	6.729981	22.25 **
Age	0.131912	9.48 **
Age-squared	-0.001448	-9.18 **
Married	0.437137	10.64 **
Speak English Very Well	0.060690	1.02
Disabled	0.007405	0.14
Less than HS	-0.244410	-4.22 **
Some College	0.011002	0.24
Four Year Degree	0.050111	0.73
Advanced Degree	0.032978	0.25
African American	-0.520161	-2.89 **
Asian Pacific American	-0.038796	-0.48
Subcontinent Asian American	0.582479	2.62 **
Hispanic American	-0.216282	-3.73 **
Native American	-0.235089	-1.37
Other Minority Group	0.373642	2.23 *
Female	-0.632175	-6.61 **

Note: *Significant at 90% confidence level.
**Significant at 95% confidence level.

Source: BBC Research & Consulting, 2007 based on analysis of 2000 Census Public Use Microdata Sample.

The construction-only model of business owner earnings shows very similar influences from neutral factors as observed in the previous model combining construction and engineering firms. After controlling for these influences, model results indicate the following significant disparities in business earnings for African American, Hispanic American and female business owners in the construction industry:

- African American construction business owners earn about 41 percent less than average;
- Hispanic American construction business owners earn about 19 percent less than average; and
- Female construction business owners earn about 47 percent less than average.

Model results also show that on average, Subcontinent Asian Americans and individuals in the Other Minority Group are likely to earn more than similarly situated non-Hispanic, white male construction business owners.

Similar to the business ownership analysis, BBC simulated business earnings for minority groups and females in the construction industry in the absence of race, ethnicity and gender-related effects.

Figure H-8 depicts these simulated business earnings and compares them to the actual, observed mean probability of business earnings for each statistically significant group.

Figure H-8.
Comparison of Actual Construction Business Owner Earnings to Simulated Earnings Under Non-Hispanic, White Male Business Environment for Groups Experiencing Significant Disparities

Group	Business owner earnings		Disparity index (100 = parity)
	Actual	Benchmark	
African American	$ 11,252	$ 18,983	59
Subcontinent Asian American	$ 41,396	$ 25,519	162
Hispanic American	$ 13,278	$ 18,539	72
Other Minority Group	$ 26,416	$ 18,838	140
Females	$ 9,925	$ 19,869	50

Source: BBC Research & Consulting from statistical models of 2000 Census of Population data.

Results suggest that African American business owners in the construction industry earn about 40 percent less than they would if they earned as much as similarly situated non-Hispanic, white males. Hispanic Americans and women respectively earn about 28 and 50 percent less than similarly situated non-Hispanic, white males.

Business owner earnings results specific to the engineering industry. Figure H-9 presents the results of the OLS model of business owner earnings for California engineering firms.

Figure H-9.
California Engineering Business Owner Earnings Model

Variable	Coefficient	t-statistic
Constant	5.398966	5.48 **
Age	0.179734	4.30 **
Age-squared	-0.001807	-3.95 **
Married	0.179178	1.44
Speak English Very Well	0.202088	0.83
Disabled	-0.217387	-0.78
Less than HS	-0.440857	-0.94
Some College	-0.338929	-1.14
Four Year Degree	-0.031136	-0.11
Advanced Degree	-0.063143	-0.21
African American	0.253169	0.74
Asian Pacific American	-0.106952	-0.59
Subcontinent Asian American	0.169822	0.47
Hispanic American	-0.153510	-0.79
Native American	1.111466	4.59 **
Other Minority Group	0.579863	2.01 *
Female	-0.470334	-3.55 **

Note: *Significant at 90% confidence level.
**Significant at 95% confidence level.
Source: BBC Research & Consulting, 2007 based on analysis of 2000 Census Public Use Microdata Sample.

While some of the neutral factors in the model of business owner earnings in the engineering industry operate in the same direction as in the construction industry model, only the combination of age and age-squared are statistically significant. The engineering business owner earnings model indicates that only women business owners appear to be experiencing a significant disparity in earnings. The coefficient for female engineering business owners implies that they earn about 38 percent less than average, after including neutral factors in the model. Model results also show that on average, Native Americans and business owners in the Other Minority Group earn more than their white male counterparts.

The study team simulated business owner earnings for females and other significant minority groups if they faced the same market environment as non-Hispanic, white males. Figure H-10 depicts these simulated business owner earnings and compares them to the actual, observed mean of engineering business owner earnings for each group.

Figure H-10.
Comparison of Actual Engineering Business Owner Earnings to Simulated Earnings Under Non-Hispanic, White Male Business Environment for Groups Experiencing Significant Disparities

Group	Self-employment Rates		Disparity index (100 = parity)
	Actual	Benchmark	
Native Americans	$ 42,983	$ 13,480	319
Other Minority Group	$ 34,175	$ 20,693	165
Females	$ 10,771	$ 17,672	61

Source: BBC Research & Consulting from statistical models of 2000 Census of Population data.

Results show that the disparity in female ownership of engineering firms is less than that found in the construction industry. Women engineering business owners earn about 39 percent less than similarly situated non-Hispanic, white males.

Likelihood of Business Loan Denial

As discussed in Appendix F, access to capital is an important factor in small business formation and expansion. Based on data for both the nation and the Pacific region from the 1998 National Survey of Small Business Finances (NSSBF), firms owned by African Americans, Asian Americans and Hispanic Americans are more frequently denied on business loan applications than non-Hispanic, white-owned firms.

There is an extensive literature on business loan denials that provides the theoretical basis for the regression models. Previous studies have used probit econometric analysis in an effort to determine whether higher rates of loan denial for minorities can be explained by neutral factors. The standard model includes four types of variables, that describe:

- The owner's credit and resources;
- The firm's credit and financial health;
- The environment in which the firm and lender operate, and
- Whether or not the owner is a member of a minority group.[5]

To examine whether neutral factors might explain the higher rates of loan denials for some minority groups, the study team developed a probit model using the data from the 1998 NSSBF. Probit regressions are the functional form of the regression analysis typically used in the literature. After excluding a small number of observations where the loan outcome was imputed, the national sample included 932 firms that had applied for a loan during the three years preceding the survey. The Pacific region included 172 such firms.

A large number of variables are required to control for differences in the neutral factors described previously. A total of 58 variables are included to represent the owners credit and resources (10 variables), the firm's credit and financial health (29 variables) and the environment in which the firm and lender operate including the nature of the loan applied for (19 variables). Given the relatively small sample sizes and the large number of variables the model requires, the study team did not attempt to estimate this model for the Pacific region by itself. Instead, we estimate a model that includes observations throughout the country and seek to identify any significant differences between the national credit market and the Pacific region credit market through interaction terms. These interactions include firms located in the Pacific region and firms owned by minorities and women in the region. This approach has been used in previous, peer-reviewed research.[6]

Figure H-11 on the following page presents the coefficients and t-statistics from the probit model of loan denials.

[5] See, for example, Blanchard, Lloyd; Zao, Bo and John Yinger. 2005. *Do Credit Barriers Exist for Minority and Women Entrepreneurs?* Center for Policy Research, Syracuse University.

[6] Blanchflower, David G.; Levine, Phillip B. and David J. Zimmerman. 2003. "Discrimination in the Small-Business Credit Market." The Review of Economics and Statistics. 85(4): 930-943.

Figure H-11.
Dependent Variable: Loan Denial

Variable	Coefficient	t-statistic
Race/ethnicity/gender		
Constant	-5.901834	-4.59 **
African American	1.147015	4.41 **
Asian American	0.342745	0.80
Hispanic American	1.086194	4.68 **
Female	-0.047219	-0.24
Pacific Region	0.157391	0.63
African American in Pacific Region	-0.665632	-1.10
Asian American in Pacific Region	0.016462	0.03
Hispanic American in Pacific Region	0.119294	0.25
Female in Pacific Region	0.218200	0.56
Owners Credit and Resources		
Age	0.007337	0.92
Owner Experience	0.010275	0.93
Less than high school education	0.090054	0.25
Some college	-0.147203	-0.71
Four year degree	-0.554377	-2.52 **
Advanced degree	-0.436286	-1.75 *
Bankruptcy in past 7 years	1.496524	2.66 **
Judgement against in past 3 years	1.057841	3.27 **
Log of net worth excluding home	-0.027334	-0.48
Owner has negative net worth (indicator)	-0.451254	-0.64

Variable	Coefficient	t-statistic
Firm's Credit and Financial Health		
D&B credit score = moderate risk	0.751698	1.50
D&B credit score = average risk	0.776498	1.55
D&B credit score = significant risk	0.511792	1.00
D&B credit score = high risk	0.469423	0.85
Total employees	-0.001487	-0.48
Percent of business owned by principal	-0.003396	-0.74
Family owned business	0.806781	2.63 **
Firm purchased	-0.296028	-1.47 *
Firm inherited	-0.045901	-0.13
Firm age	-0.013492	-1.23
Firm has checking account	0.291959	0.88
Firm has savings account	-0.268816	-1.53
Firm has line of credit	-0.935108	-4.95 **
Existing capital leases	-0.089363	-0.46
Existing mortgage for business	-0.334783	-1.57 *
Existing vehicle loans	-0.540121	-2.91 **
Existing equipment loans	-0.600107	-2.82 **
Existing loans from stockholders	0.587765	2.89 **
Other existing loans	-0.108275	-0.54
Firm used trade credit in past year	-0.230761	-1.41
Log of total sales in prior year	-0.013200	-0.20
Negative sales in prior year (indicator)	0.190337	0.23
Log of cost of doing business in prior year	0.019601	0.37
Log of total assetts	0.029251	0.41
Negative total assetts (indicator)	-0.193784	-0.22
Log of total equity	0.095306	1.27
Negative total equity (indicator)	0.959581	1.24
Firm bankruptcy in past 7 years	0.744926	1.39
Firm delinquency in business transactions	1.218895	6.65 **

Variable	Coefficient	t-statistic
Firm and Lender Environment and Loan Characteristics		
Partnership	0.065837	0.19
S corporation	-0.275278	-1.17
C corporation	-0.298310	-1.07
Construction industry	0.552832	2.01 **
Manufacturing industry	0.293527	1.11
Transportation. communications and utilities industry	0.418079	0.93
Finance, insurance and real estate industries	-0.047970	-0.13
Engineering industry	0.656266	1.82 *
Other industry	0.310062	1.58
Herfindahl index =.10 to .18	2.366303	4.52 **
Herfindahl index = .18 or above	2.667912	5.05 **
Located in MSA	0.190705	1.04
Sales market local only	0.191879	1.20
Loan amount	0.000000	0.00
Capital lease application	-0.171244	-0.49
Business mortgage application	-0.846545	-2.97 **
Vehicle loan application	-1.112551	-3.72 **
Equipment loan application	-0.768501	-2.68 **
Loan for other purposes	-0.304385	-1.51

Note: * Significant at 90% confidence level.
** Significant at 95% confidence level.

Source: BBC Research & Consulting analysis of 1998 NSSBF data.

The loan denial model indicates that a number of neutral factors are significantly correlated with the probability of loan denial. These include:

- Factors specific to the business owner, including whether or not the owner had been personally bankrupt within the past seven years or had a judgment against them;
- Factors related to the firm's credit and financial health, including if the firm had existing loans and lines of credit. Family-owned firms and firms with delinquencies in business transactions were more likely to be denied.
- Some of the firm, lender and loan environment characteristics. Firms in the construction industry are more likely to have their loan applications denied than other firms. Firms in highly concentrated industry segments (as measured by the Herfindhahl Index) are more likely to be denied. Potentially collateralized loans such as business mortgages, vehicle loans and equipment loans are less likely to be denied.

After accounting for these and the other potential neutral influences, firms owned by African Americans and Hispanic Americans remain significantly more likely to have their loans denied than other firms. The interaction terms for the Pacific region, and for minority- and women-owned firms within the region, are insignificant. This result implies that the probabilities of loan denials for minority- and women-owned firms within the Pacific region are not statistically different from the national probabilities.

The study team simulated loan approval rates for minority groups with statistically significant disparities (note that the approval rate is equal to one minus the denial rate). Figure H-12 shows these simulated loan approval rates and compares them to the actual, observed mean probability of loan approval for each group in the NSSBF data set.

Exhibit H-12.
Comparison of Actual Loan Approval Rates to Simulated Loan Approval Rates Under Non-Hispanic, White Male Business Environment for Groups Experiencing Significant Disparities

Group	Loan Approval Rates		Disparity Index (100 = parity)
	Actual	Benchmark	
African Americans	50.1%	78.3%	64
Hispanic Americans	51.6%	83.9%	62

Source: BBC Research & Consulting analysis of 1998 NSSBF data.

Based on the NSSBF data, African American-owned firms that applied for loans were denied at a rate of nearly 50 percent. Model results show that African American-owned firms would be denied loans about 22 percent of the time if they were denied at the same rate as similarly situate firms owned by non-Hispanic, white males. Hispanic American-owned firms would be denied about 16 percent of the time. The actual loan denial rate for Hispanic Americans who applied for loans is 48 percent.

Bid Capacity

One of the requirements for BBC to consider a firm to be "available" for a Caltrans project in BBC's disparity analysis is that the firm had previously bid on, or been awarded, another contract or subcontract of similar size. The study team considers the largest previous bid (or award) by a firm to be the measure of its "bid capacity." The following analysis considers whether there is evidence of disparities in bid capacity for minority- and women-owned firms in the California construction and engineering industries.

The study team conducted an extensive survey of California transportation construction and engineering firms, which is described in Appendix C of the report. The team attempted to contact every establishment located in California in the relevant lines of business. After narrowing the sample to firms in pertinent lines of work with appropriate experience and interest for Caltrans projects, and compressing multiple responses from multi-establishment firms in California into single firm observations, the survey effort produced a database of 3,998 firms potentially available for Caltrans work.[7] The following analysis of bid capacity relies on the results of the Availability Survey.

One of the factors that affects bid capacity is the industry specialization of construction and engineering firms. Some industry segments, such as construction of water, sewer and utility lines, apparently involve larger projects. Other segments, such as landscape architecture and surveying and mapmaking involve smaller scale assignments. One way of controlling for variation in bid capacities in different sub-industries is to assess whether or not a firm has a bid capacity above or below the median level for firms in that sub-industry. BBC can then test whether minority- and women-owned firms bid on larger or smaller contracts or subcontracts compared with other firms in their sub-industry.

[7] See Appendix C, pages 8 and 9 for further description of the survey sample and process.

Figure H-13 indicates the median bid capacity among California-based establishments in each of the 18 industry segments within the construction and engineering industries. Note that the survey questions regarding the largest project that firms had bid on or been awarded captured data in dollar ranges rather than specific dollar amounts.

Figure H-13.
Median Bid Capacity by Industry Segment

Industry Segment	Median Bid Capacity
Highway construction and concrete work	Over $500,000 to $1 million
Asphalt and concrete supply	Over $100,000 to $500,000
Structural steel erection	Over $100,000 to $500,000
Wrecking and demolition	Over $100,000 to $500,000
Electrical work	Over $100,000 to $500,000
Construction sand and gravel	Over $100,000 to $500,000
Heavy construction equipment rental	Over $100,000 to $500,000
Excavation and drilling	Over $100,000 to $500,000
Water, sewer and utility lines	Over $1 million to $2 million
Trucking	Over $100,000 to $500,000
Testing services	Over $100,000 to $500,000
Landscape architecture	$100,000 or less
Surveying and mapmaking	$100,000 or less
Engineering	Over $100,000 to $500,000
Construction management	Over $500,000 to $1 million
Transportation consulting and planning	Over $100,000 to $500,000
Environmental research, consulting and remediation	Over $100,000 to $500,000
Archeological expeditions	Over $100,000 to $500,000

Source: BBC Research & Consulting, 2007.

Firms with bid capacities above the median for their industry segments are counted as available for larger Caltrans projects than most of the firms in their line of business (as well counted as available for smaller assignments). Thus, these firms figure more prominently in the availability analysis than firms with smaller bid capacities. An initial question is whether or not minority and women-owned firms are as likely as majority owned firms to have above average bid capacity for their industry segment. Figure H-14 compares the proportions of firms with above average bid capacity by ownership.

Figure H-14. Proportion of Firms with Above Average Bid Capacity by Ownership

Source:
BBC Research & Consulting, 2007.

Firm Ownership	Proportion With Above-Median Bid Capacity	
	Construction	Engineering
African American	29.4%	39.3%
Asian-Pacific American	57.1%	31.6%
Subcontinent Asian American	11.1%	45.9%
Hispanic American	33.2%	47.9%
Native American	38.2%	26.7%
Female	36.1%	28.6%
Majority-owned	41.3%	34.7%
All Firms	**39.5%**	**34.7%**

The results shown in Figure H-14 indicate that, in aggregate, the proportion of minority and women-owned businesses with above median bid capacity slightly lower than the proportion of firms owned by non-Hispanic, white males that have above median bid capacity for the construction industry. For the engineering industry, the proportion of firms with above median bid capacity is the same for minority- and women-owned firms (in aggregate) as for majority-owned firms. There are, however, differences in the proportions of firms with above median bid capacity for individual groups, such as African Americans or Hispanic American.

BBC then considered whether neutral factors account for differences among groups in the probability of having above median bid capacity and if there are statistically significant disparities in bid capacity after accounting for neutral factors.

There are a number of variables from the Availability Survey that may be correlated with bid capacity. Annual revenues, number of employees and, potentially, whether or not a firm has multiple establishments in California, are examples. However, the direction of causation for these variables is unclear. Do firms have greater bid capacity because they have more employees, or do they have more employees because they bid on and win larger assignments?

After considering the array of variables from the Availability Survey, the study team determined that the neutral factor that might best explain differences in bid capacity while being truly exogenous to that capacity was age of the firm. Theoretically, the longer firms are in business, the larger the contract or subcontract they may pursue.

To test this hypothesis, the study team conducted separate logistic regression analyses for the construction and engineering industries to determine whether or not bid capacity could be at least partly explained by the age of the firm and whether or not minority- and women-owned firms differ from majority-owned firms of similar ages.

Bid capacity results for the California construction industry. Results for the California construction industry are shown in Figure H-12, below. The logistic regression model indicates:

- The age of the firm is a significant predictor of having above average bid capacity;
- Any remaining negative differences in the likelihood of having above average bid capacity for minority and women-owned firms were not statistically significant; and
- Construction firms owned by Asian-Pacific Americans are significantly more likely to have above average bid capacity than other firms in their sub-industries.

Figure H-15. California Construction Industry Bid Capacity Model

Note:
*Significant at 90% confidence level.
**Significant at 95% confidence level.

Source:
BBC Research and Consulting, 2007.

Variable	Coefficient	Wald-statistic
Constant	-0.904	75.00 **
Age of firm	0.020	40.36 **
African American	-0.362	1.31
Asian-Pacific American	0.963	7.48 **
Subcontinent Asian American	-1.381	1.68
Hispanic American	-0.182	1.27
Native American	0.185	0.26
Female	-0.113	0.63

Bid capacity results for the California engineering industry. Results for the California engineering industry are shown in Figure H-16, below. The logistic regression model for this industry indicates:

- The age of the firm is a significant predictor of having above average bid capacity for engineering as well as construction;
- Any remaining negative differences in the likelihood of having above average bid capacity for minority and women-owned firms were not statistically significant; and
- Engineering firms owned by Subcontinent Asian Americans and Hispanic Americans are significantly more likely to have above average bid capacity than other firms in their sub-industries.

Figure H-16 California Engineering Industry Bid Capacity Model

Note:
*Significant at 90% confidence level.
**Significant at 95% confidence level.

Source:
BBC Research and Consulting, 2007.

Variable	Coefficient	Wald-statistic
Constant	-1.285	107.42 **
Age of firm	0.027	42.03 **
African American	0.499	1.56
Asian-Pacific American	0.037	0.02
Subcontinent Asian American	0.698	4.15 **
Hispanic American	0.791	10.11 **
Native American	-0.128	0.05
Female	-0.213	1.46

APPENDIX H.
Regression Analysis

In Section III and Appendix F, the study team noted that there were statistically significant disparities for some minority groups (and non-Hispanic, white women) in rates of business ownership, earnings of business owners, and frequency of business loan denials. BBC considered the possibility that neutral factors, such as age, education, access to capital and creditworthiness (among others) might account for at least a portion of these disparities. The study team further investigated these issues through multivariate regression analyses. This appendix documents the regression analysis.

In the comparison of availability versus utilization of minority and women-owned firms for the disparity analysis, the study team only considers firms to be available for a potential project if they had previously bid on (or been awarded) a project of similar size. If, however, there are significant disparities in "bid capacity" based on minority or female firm ownership, the study team's approach might underestimate the availability of minority and women-owned firms in the disparity analysis (and perhaps not find disparities when more comprehensive analysis would reveal them). This appendix also further investigates potential disparities in bid capacity for minority and women-owned firms.

Business Ownership

As discussed in Appendix F, there is an extensive literature on the determinants of business ownership. Prior studies have found that neutral factors such as access to financial capital, education, age, family characteristics (e.g. marital status) and other factors can help explain rates of self-employment.

This issue has also been examined in other disparity studies. Prior studies in Minnesota[1] and Illinois[2] have conducted econometric analyses to investigate whether or not disparities in business ownership among race, ethnic and gender groups in the combined construction and engineering industry remain after controlling for neutral factors. These studies have incorporated probit econometric models using data from the 2000 Census Public Use Microdata Sample (2000 PUMS). These studies have been among the materials submitted to the courts in subsequent litigation concerning states' implementation of the Federal DBE Program.

To further examine potential disparities in the rates of business ownership among employees in the California construction and engineering industries, the study team developed a probit model using 2000 PUMS data for California residents employed in these industries. The PUMS data is a 5 percent sample of U.S. households and the Census Bureau assigns a weight to each observation so that the weighted sample is representative of the population as a whole.

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[1] National Economic Research Associates, Inc. 2000. *Disadvantaged Business Enterprise Availability Study*. Prepared for the Minnesota Department of Transportation.

[2] National Economic Research Associates, Inc. 2004. *Disadvantaged Business Enterprise Availability Study*. Prepared for the Illinois Department of Transportation.

BBC used a probit model functional form for the regression analysis, consistent with other research. The probit model of business ownership in California includes more than 52,000 individuals working in the construction and engineering industries. The dependent variable is binary – coded as a "1" for individuals who are self-employed and a "0" for individuals who are not self-employed. The model estimates the probabilities of being a business owner among workers in the industry. The study team excluded observations where the Census Bureau had imputed self-employment (the dependent variable).

The extensive literature on business ownership explains the theoretical basis for business ownership regression models. BBC developed a model specification based on models developed by past researchers at the national level or in other states. Independent variables include:

- Personal characteristics potentially linked to the likelihood of business ownership (age, age-squared, marital status, number of children and elderly people in the household, ability to speak English and disability status);
- Variables to control for differences in educational attainment;
- Measures and indicators related to personal financial resources and constraints (home ownership, home value, monthly mortgage payment, dividend and interest income and additional household income from a spouse or unmarried partner); and
- Variables to indicate the race, ethnicity and gender of the individual.

The specification of this model is very similar to models used in other studies previously reviewed by the courts.

Results for the California transportation and engineering industries. Figure H-1 presents the coefficients and t-statistics for the initial probit model, which combines individuals working in both the construction and engineering industries. The model indicates that several of the neutral factors are statistically significant in predicting the probability of business ownership;

- Older individuals are more likely to be business owners, but this marginal effect declines for the oldest individuals;
- Interest and dividend income is positively correlated with being a business owner;
- Individuals who speak English "very well" are more likely to be business owners;
- Having some college, but not necessarily a four year college degree, increases the likelihood of being a business owner;
- Having an advanced degree reduces the likelihood of being a business owner;
- Income of a spouse or partner increases the likelihood of a person being a business owner; and
- The combination of the negative coefficient on the binary indicator of home ownership and the positive coefficient on the value of the home imply that homeownership only begins to increase the likelihood of business ownership for individuals with homes valued above approximately $150,000.

The effects of these neutral factors are generally consistent with previous research on business ownership and entrepreneurship. Even after controlling for the neutral factors that can be identified based on the PUMS data, statistically significant disparities in rates of business ownership remain for African Americans, Asian Pacific Americans, Subcontinent Asian Americans, Hispanic Americans and women.

Figure H-1.
California Combined Construction and Engineering Business Ownership Probit Model

Variable	Coefficient	t-statistic
Constant	-3.041131	-28.82 **
Age	0.089546	17.48 **
Age-squared	-0.000784	-12.85 **
Married	0.006204	0.32
Disabled	-0.017051	-0.76
Own children younger than 10	0.003853	0.55
Number of people over 65 in HH	-0.004007	-0.05
Own home	-0.102716	-4.60 **
Home value ($000s)	0.000001	14.38 **
Monthly mortgage payment	0.000025	1.67 *
Interest and dividend income ($000s)	0.000002	3.65 **
Income of spouse or partner ($000s)	0.000001	2.24 *
Speaks English very well	-0.030202	-1.14
Less than high school education	-0.024449	-1.03
Some college	0.115799	6.00 **
Four year degree	0.095091	3.25 **
Advanced degree	-0.034981	-0.72
African American	-0.324188	-6.56 **
Asian Pacific American	-0.004323	-0.11
Subcontinent Asian American	-0.457124	-2.79 **
Hispanic American	-0.288456	-12.20 **
Native American	-0.081738	-1.42
Other minority group	0.074456	0.98
Female	-0.415492	-15.00 **

Note: *Significant at 90% confidence level.
**Significant at 95% confidence level.
Source BBC Research & Consulting based on analysis of 2000 Census Public Use Microdata Sample.

Results specific to the construction industry. It is possible that the influence of neutral factors, and perhaps race and gender, on self-employment in the construction industry differ from those in the engineering industry. To examine this possibility the study team developed separate models by industry.

Figure H-2 presents the results of the probit model of self-employment in the California construction industry.

Figure H-2.
California Construction Business Ownership Probit Model

Variable	Coefficient	t-statistic
Constant	-3.58177	-9.67 **
Age	0.086555	5.27 **
Age-squared	-0.000645	-3.48 **
Married	-0.014554	-0.27
Disabled	0.053411	0.70
Own children younger than 10	0.011743	0.56
Number of people over 65 in HH	0.120283	0.81
Own home	-0.254078	-3.85 **
Home value ($000s)	0.000001	6.86 **
Monthly mortgage payment	0.000014	-0.47
Interest and dividend income ($000s)	0.000002	1.76 *
Income of spouse or partner ($000s)	0.0000001	2.55 *
Speaks English very well	-0.069579	-0.80
Less than high school education	-0.053793	-0.32
Some college	0.046507	0.50
Four year degree	0.256621	2.83 **
Advanced degree	0.230272	2.41 *
African American	-0.486443	-2.92 **
Asian Pacific American	-0.266160	-4.04 **
Subcontinent Asian American	-0.180251	-1.02
Hispanic American	-0.078585	-0.99
Native American	0.491396	2.61 **
Other minority group	0.262255	1.51
Female	-0.257010	-5.07 **

Note: *Significant at 90% confidence level.
**Significant at 95% confidence level.
Source: BBC Research & Consulting based on analysis of 2000 Census Public Use Microdata Sample.

Results of the construction industry only model are generally similar to the model for the combined industries, with the following exceptions:

- Speaking English "very well" is not a significant factor in self-employment in the construction industry;
- Completing either some college or a four year degree significantly increases the likelihood of being a business owner in construction; and
- There is not a significant disparity in the rate of construction business ownership among Asian Pacific Americans in the construction industry after accounting for neutral factors.

The construction business ownership model continues to indicate significant disparities in the rate of business ownership for African Americans, Subcontinent Asian Americans, Hispanic Americans and women after accounting for neutral factors identifiable from the 2000 PUMS data.

The probit modeling approach can then be used to estimate how many business owners there would be among each minority group with significant disparities in self-employment rates if they had the same probability of business ownership as similarly situated non-Hispanic white males. To conduct this next step in the analysis, BBC re-estimated the probit business ownership model for the construction industry based on only the non-Hispanic white males in the PUMS dataset.[3] The study team then applied the coefficients from this version of the model to the characteristics of the minority and female individuals in the dataset to calculate the probability of business ownership in the absence of race, ethnicity and gender-related effects. Figure H-3 depicts these simulated business ownership rates and compares them to the actual, observed mean probability of business ownership for each statistically significant group from the PUMS data. This simulation approach has also been incorporated in other disparity studies reviewed by the courts.

Figure H-3.
Comparison of Actual Construction Business Ownership Rates to Simulated Rates Under Non-Hispanic, White Male Business Environment for Groups Experiencing Significant Disparities

Group	Self-employment Rates		Disparity index (100 = parity)
	Actual	Benchmark	
African American	14.5%	23.7%	61
Subcontinent Asian American	16.0%	30.7%	52
Hispanic American	12.1%	22.6%	53
Females	14.8%	27.3%	54

Source: BBC Research & Consulting from statistical models of 2000 Census of Population data.

These results suggest that there are only 61 percent as many African American owned construction businesses in California as one would anticipate if African Americans working in the industry owned businesses at the same rate as similarly situated non-Hispanic, white males. The disparities are somewhat larger for Subcontinent Asian Americans, Hispanic Americans and women.

[3] This version of the model excludes the race, ethnicity and gender indicator variables since the value for all of those variables would be zero.

Results specific to the engineering industry. The study team also estimated a probit business ownership model for the California engineering industry. Figure H-4 presents the results of this model.

Figure H-4.
California Engineering Business Ownership Probit Model

Variable	Coefficient	t-statistic
Constant	-3.03479	-30.26 **
Age	0.089098	18.41 **
Age-squared	-0.000768	-13.41 **
Married	-0.000418	-0.02
Disabled	-0.006170	-0.29
Own children younger than 10	0.007628	1.16
Number of people over 65 in HH	0.015675	0.23
Own home	-0.107322	-5.13 **
Home value ($000s)	0.000001	15.78 **
Monthly mortgage payment	0.000014	1.03
Interest and dividend income ($000s)	0.000002	4.30 **
Income of spouse or partner ($000s)	0.000001	2.80 **
Speaks English very well	-0.050141	-1.98 *
Less than high school education	-0.029736	-1.27
Some college	0.079236	4.24 **
Four year degree	-0.021547	-0.86
Advanced degree	-0.173040	-4.98 **
African American	-0.340434	-7.23 **
Asian Pacific American	-0.127010	-3.90 **
Subcontinent Asian American	-0.354839	-2.93 **
Hispanic American	-0.282162	-12.46 **
Native American	-0.035647	-0.65
Other minority group	0.095299	1.37
Female	-0.429396	-18.01 **

Note: *Significant at 90% confidence level.
**Significant at 95% confidence level.
Source: BBC Research & Consulting based on analysis of 2000 Census Public Use Microdata Sample.

Many of the neutral factors associated with being a business owner in the engineering industry are similar to those in the construction industry, with some differences. In the engineering industry, more education is required to significantly increase the likelihood of being a business owner than in the construction industry. The combination of the negative coefficient on the binary indicator of home -ownership and the positive coefficient on the value of the home imply that homeownership only begins to increase the likelihood of business ownership in the engineering industry for individuals with homes valued above approximately $250,000.

The engineering business ownership model continues to indicate significant disparities in the rate of business ownership for African Americans, Asian Pacific Americans and women after accounting for neutral factors identifiable from the 2000 PUMS data. Disparities for Hispanic Americans and Subcontinent Asian Americans are not statistically significant. Native Americans working in this industry are more likely than non-Hispanic whites to own businesses.

The study team simulated engineering business ownership rates for these groups if they faced the same marked environment as white males. Figure H-5 depicts these simulated business ownership rates and compares them to the actual, observed mean probability of engineering business ownership for each statistically significant group.

Figure H-5.
Comparison of Actual Engineering Business Ownership Rates to Simulated Rates Under Non-Hispanic, White Male Business Environment for Groups Experiencing Significant Disparities

Group	Self-employment Rates		Disparity index (100 = parity)
	Actual	Benchmark	
African American	6.0%	14.8%	40
Asian-Pacific American	10.2%	15.2%	67
Native American	23.2%	13.6%	171
Females	9.4%	14.7%	64

Source: BBC Research & Consulting from statistical models of 2000 Census of Population data.

These results suggest that the disparity in engineering business ownership among African Americans is even larger than in the construction industry. The disparity in female ownership of engineering firms is less than found in the construction industry.

Business Earnings

Appendix F includes analysis of business earnings for business owners in the construction and engineering industries in California. Differences in business owner earnings may be at least partially accounted for by race- and gender-neutral factors such as age.

The study team applied regression analysis to the 2000 PUMS data to examine whether disparities in business earnings remained after controlling for neutral factors. Consistent with past court-reviewed research, BBC applied an ordinary least squares regression. The OLS model of construction and engineering business owner earnings in California included 7,546 observations.

Consistent with the model specifications that have been reviewed by the courts, the dependent variable in this model is the natural log of business earnings. Business owners reporting zero or negative business earnings were excluded, as were observations where the Census Bureau had imputed the amount of business earnings. Apart from variables indicating the race, ethnicity and gender of the business owner, the model also contained the available measures from the PUMS data considered likely to affect earnings potential – including age, age-squared, marital status, ability to speak English very well, disability condition and educational attainment. This model is very similar to models reviewed by the courts after other recent disparity studies.[4]

[4] For example, National Economic Research Associates, Inc. 2000. *Disadvantaged Business Enterprise Availability Study*. Prepared for the Minnesota Department of Transportation; and National Economic Research Associates, Inc. 2004. *Disadvantaged Business Enterprise Availability Study*. Prepared for the Illinois Department of Transportation.

Results for the California construction and engineering industries. Figure H-6 depicts the results of the OLS model for the combined construction and engineering industries (past studies reviewed by the courts have combined construction and engineering). The model indicates that several of the neutral factors are statistically significant in predicting earnings of business owners in the California construction and engineering industries:

- Older business owners have greater earnings, but this marginal effect declines for the oldest individuals;
- Owners who are married tend to have greater business earnings; and
- Business owners with less than a high school degree tend to have lower business earnings.

After accounting for neutral factors, there are statistically significant disparities for African American and Hispanic American business owners as well as women.

Figure H-6.
California Combined Construction and Engineering Business Owner Earnings Model

Variable	Coefficient	t-statistic
Constant	6.671328	23.22 **
Age	0.134376	10.21 **
Age-squared	-0.001459	-9.80 **
Married	0.409922	10.45 **
Speak English Very Well	0.050617	0.89
Disabled	-0.002063	-0.04
Less than HS	-0.245781	-4.28 **
Some College	-0.008317	-0.18
Four Year Degree	0.035475	0.58
Advanced Degree	0.017928	0.19
African American	-0.472129	-2.80 **
Asian Pacific American	-0.075027	-1.00
Subcontinent Asian American	0.340119	1.41
Hispanic American	-0.211683	-3.83 **
Native American	-0.172427	-1.05
Other Minority Group	0.426328	2.98 **
Female	-0.618914	-8.16 **

Note: *Significant at 90% confidence level.
**Significant at 95% confidence level.

Source: BBC Research & Consulting, 2007 based on analysis of 2000 Census Public Use Microdata Sample.

Business owner earnings results specific to the construction industry. The study team recognized that the influences on business owner earnings might differ between construction firms and engineering firms. Figure H-7 presents the results of the OLS model of business owner earnings specific to the California construction industry.

Figure H-7.
California Construction Business Owner Earnings Model

Variable	Coefficient	t-statistic
Constant	6.729981	22.25 **
Age	0.131912	9.48 **
Age-squared	-0.001448	-9.18 **
Married	0.437137	10.64 **
Speak English Very Well	0.060690	1.02
Disabled	0.007405	0.14
Less than HS	-0.244410	-4.22 **
Some College	0.011002	0.24
Four Year Degree	0.050111	0.73
Advanced Degree	0.032978	0.25
African American	-0.520161	-2.89 **
Asian Pacific American	-0.038796	-0.48
Subcontinent Asian American	0.582479	2.62 **
Hispanic American	-0.216282	-3.73 **
Native American	-0.235089	-1.37
Other Minority Group	0.373642	2.23 *
Female	-0.632175	-6.61 **

Note: *Significant at 90% confidence level.
**Significant at 95% confidence level.

Source: BBC Research & Consulting, 2007 based on analysis of 2000 Census Public Use Microdata Sample.

The construction-only model of business owner earnings shows very similar influences from neutral factors as observed in the previous model combining construction and engineering firms. After controlling for these influences, model results indicate the following significant disparities in business earnings for African American, Hispanic American and female business owners in the construction industry:

- African American construction business owners earn about 41 percent less than average;
- Hispanic American construction business owners earn about 19 percent less than average; and
- Female construction business owners earn about 47 percent less than average.

Model results also show that on average, Subcontinent Asian Americans and individuals in the Other Minority Group are likely to earn more than similarly situated non-Hispanic, white male construction business owners.

Similar to the business ownership analysis, BBC simulated business earnings for minority groups and females in the construction industry in the absence of race, ethnicity and gender-related effects.

Figure H-8 depicts these simulated business earnings and compares them to the actual, observed mean probability of business earnings for each statistically significant group.

Figure H-8.
Comparison of Actual Construction Business Owner Earnings to Simulated Earnings Under Non-Hispanic, White Male Business Environment for Groups Experiencing Significant Disparities

Group	Business owner earnings		Disparity index (100 = parity)
	Actual	Benchmark	
African American	$ 11,252	$ 18,983	59
Subcontinent Asian American	$ 41,396	$ 25,519	162
Hispanic American	$ 13,278	$ 18,539	72
Other Minority Group	$ 26,416	$ 18,838	140
Females	$ 9,925	$ 19,869	50

Source: BBC Research & Consulting from statistical models of 2000 Census of Population data.

Results suggest that African American business owners in the construction industry earn about 40 percent less than they would if they earned as much as similarly situated non-Hispanic, white males. Hispanic Americans and women respectively earn about 28 and 50 percent less than similarly situated non-Hispanic, white males.

Business owner earnings results specific to the engineering industry. Figure H-9 presents the results of the OLS model of business owner earnings for California engineering firms.

Figure H-9.
California Engineering Business Owner Earnings Model

Variable	Coefficient	t-statistic
Constant	5.398966	5.48 **
Age	0.179734	4.30 **
Age-squared	-0.001807	-3.95 **
Married	0.179178	1.44
Speak English Very Well	0.202088	0.83
Disabled	-0.217387	-0.78
Less than HS	-0.440857	-0.94
Some College	-0.338929	-1.14
Four Year Degree	-0.031136	-0.11
Advanced Degree	-0.063143	-0.21
African American	0.253169	0.74
Asian Pacific American	-0.106952	-0.59
Subcontinent Asian American	0.169822	0.47
Hispanic American	-0.153510	-0.79
Native American	1.111466	4.59 **
Other Minority Group	0.579863	2.01 *
Female	-0.470334	-3.55 **

Note: *Significant at 90% confidence level.
**Significant at 95% confidence level.
Source: BBC Research & Consulting, 2007 based on analysis of 2000 Census Public Use Microdata Sample.

While some of the neutral factors in the model of business owner earnings in the engineering industry operate in the same direction as in the construction industry model, only the combination of age and age-squared are statistically significant. The engineering business owner earnings model indicates that only women business owners appear to be experiencing a significant disparity in earnings. The coefficient for female engineering business owners implies that they earn about 38 percent less than average, after including neutral factors in the model. Model results also show that on average, Native Americans and business owners in the Other Minority Group earn more than their white male counterparts.

The study team simulated business owner earnings for females and other significant minority groups if they faced the same market environment as non-Hispanic, white males. Figure H-10 depicts these simulated business owner earnings and compares them to the actual, observed mean of engineering business owner earnings for each group.

Figure H-10.
Comparison of Actual Engineering Business Owner Earnings to Simulated Earnings Under Non-Hispanic, White Male Business Environment for Groups Experiencing Significant Disparities

Group	Self-employment Rates		Disparity index (100 = parity)
	Actual	Benchmark	
Native Americans	$ 42,983	$ 13,480	319
Other Minority Group	$ 34,175	$ 20,693	165
Females	$ 10,771	$ 17,672	61

Source: BBC Research & Consulting from statistical models of 2000 Census of Population data.

Results show that the disparity in female ownership of engineering firms is less than that found in the construction industry. Women engineering business owners earn about 39 percent less than similarly situated non-Hispanic, white males.

Likelihood of Business Loan Denial

As discussed in Appendix F, access to capital is an important factor in small business formation and expansion. Based on data for both the nation and the Pacific region from the 1998 National Survey of Small Business Finances (NSSBF), firms owned by African Americans, Asian Americans and Hispanic Americans are more frequently denied on business loan applications than non-Hispanic, white-owned firms.

There is an extensive literature on business loan denials that provides the theoretical basis for the regression models. Previous studies have used probit econometric analysis in an effort to determine whether higher rates of loan denial for minorities can be explained by neutral factors. The standard model includes four types of variables, that describe:

- The owner's credit and resources;
- The firm's credit and financial health;
- The environment in which the firm and lender operate, and
- Whether or not the owner is a member of a minority group.[5]

To examine whether neutral factors might explain the higher rates of loan denials for some minority groups, the study team developed a probit model using the data from the 1998 NSSBF. Probit regressions are the functional form of the regression analysis typically used in the literature. After excluding a small number of observations where the loan outcome was imputed, the national sample included 932 firms that had applied for a loan during the three years preceding the survey. The Pacific region included 172 such firms.

A large number of variables are required to control for differences in the neutral factors described previously. A total of 58 variables are included to represent the owners credit and resources (10 variables), the firm's credit and financial health (29 variables) and the environment in which the firm and lender operate including the nature of the loan applied for (19 variables). Given the relatively small sample sizes and the large number of variables the model requires, the study team did not attempt to estimate this model for the Pacific region by itself. Instead, we estimate a model that includes observations throughout the country and seek to identify any significant differences between the national credit market and the Pacific region credit market through interaction terms. These interactions include firms located in the Pacific region and firms owned by minorities and women in the region. This approach has been used in previous, peer-reviewed research.[6]

Figure H-11 on the following page presents the coefficients and t-statistics from the probit model of loan denials.

[5] See, for example, Blanchard, Lloyd; Zao, Bo and John Yinger. 2005. *Do Credit Barriers Exist for Minority and Women Entrepreneurs?* Center for Policy Research, Syracuse University.

[6] Blanchflower, David G.; Levine, Phillip B. and David J. Zimmerman. 2003. "Discrimination in the Small-Business Credit Market." The Review of Economics and Statistics. 85(4): 930-943.

Figure H-11.
Dependent Variable: Loan Denial

Variable	Coefficient	t-statistic
Race/ethnicity/gender		
Constant	-5.901834	-4.59 **
African American	1.147015	4.41 **
Asian American	0.342745	0.80
Hispanic American	1.086194	4.68 **
Female	-0.047219	-0.24
Pacific Region	0.157391	0.63
African American in Pacific Region	-0.665632	-1.10
Asian American in Pacific Region	0.016462	0.03
Hispanic American in Pacific Region	0.119294	0.25
Female in Pacific Region	0.218200	0.56
Owners Credit and Resources		
Age	0.007337	0.92
Owner Experience	0.010275	0.93
Less than high school education	0.090054	0.25
Some college	-0.147203	-0.71
Four year degree	-0.554377	-2.52 **
Advanced degree	-0.436286	-1.75 *
Bankruptcy in past 7 years	1.496524	2.66 **
Judgement against in past 3 years	1.057841	3.27 **
Log of net worth excluding home	-0.027334	-0.48
Owner has negative net worth (indicator)	-0.451254	-0.64

Variable	Coefficient	t-statistic
Firm's Credit and Financial Health		
D&B credit score = moderate risk	0.751698	1.50
D&B credit score = average risk	0.776498	1.55
D&B credit score = significant risk	0.511792	1.00
D&B credit score = high risk	0.469423	0.85
Total employees	-0.001487	-0.48
Percent of business owned by principal	-0.003396	-0.74
Family owned business	0.806781	2.63 **
Firm purchased	-0.296028	-1.47 *
Firm inherited	-0.045901	-0.13
Firm age	-0.013492	-1.23
Firm has checking account	0.291959	0.88
Firm has savings account	-0.268816	-1.53
Firm has line of credit	-0.935108	-4.95 **
Existing capital leases	-0.089363	-0.46
Existing mortgage for business	-0.334783	-1.57 *
Existing vehicle loans	-0.540121	-2.91 **
Existing equipment loans	-0.600107	-2.82 **
Existing loans from stockholders	0.587765	2.89 **
Other existing loans	-0.108275	-0.54
Firm used trade credit in past year	-0.230761	-1.41
Log of total sales in prior year	-0.013200	-0.20
Negative sales in prior year (indicator)	0.190337	0.23
Log of cost of doing business in prior year	0.019601	0.37
Log of total assetts	0.029251	0.41
Negative total assetts (indicator)	-0.193784	-0.22
Log of total equity	0.095306	1.27
Negative total equity (indicator)	0.959581	1.24
Firm bankruptcy in past 7 years	0.744926	1.39
Firm delinquency in business transactions	1.218895	6.65 **

Variable	Coefficient	t-statistic
Firm and Lender Environment and Loan Characteristics		
Partnership	0.065837	0.19
S corporation	-0.275278	-1.17
C corporation	-0.298310	-1.07
Construction industry	0.552832	2.01 **
Manufacturing industry	0.293527	1.11
Transportation. communications and utilities industry	0.418079	0.93
Finance, insurance and real estate industries	-0.047970	-0.13
Engineering industry	0.656266	1.82 *
Other industry	0.310062	1.58
Herfindahl index =.10 to .18	2.366303	4.52 **
Herfindahl index = .18 or above	2.667912	5.05 **
Located in MSA	0.190705	1.04
Sales market local only	0.191879	1.20
Loan amount	0.000000	0.00
Capital lease application	-0.171244	-0.49
Business mortgage application	-0.846545	-2.97 **
Vehicle loan application	-1.112551	-3.72 **
Equipment loan application	-0.768501	-2.68 **
Loan for other purposes	-0.304385	-1.51

Note: * Significant at 90% confidence level.
** Significant at 95% confidence level.

Source: BBC Research & Consulting analysis of 1998 NSSBF data.

The loan denial model indicates that a number of neutral factors are significantly correlated with the probability of loan denial. These include:

- Factors specific to the business owner, including whether or not the owner had been personally bankrupt within the past seven years or had a judgment against them;
- Factors related to the firm's credit and financial health, including if the firm had existing loans and lines of credit. Family-owned firms and firms with delinquencies in business transactions were more likely to be denied.
- Some of the firm, lender and loan environment characteristics. Firms in the construction industry are more likely to have their loan applications denied than other firms. Firms in highly concentrated industry segments (as measured by the Herfindhahl Index) are more likely to be denied. Potentially collateralized loans such as business mortgages, vehicle loans and equipment loans are less likely to be denied.

After accounting for these and the other potential neutral influences, firms owned by African Americans and Hispanic Americans remain significantly more likely to have their loans denied than other firms. The interaction terms for the Pacific region, and for minority- and women-owned firms within the region, are insignificant. This result implies that the probabilities of loan denials for minority- and women-owned firms within the Pacific region are not statistically different from the national probabilities.

The study team simulated loan approval rates for minority groups with statistically significant disparities (note that the approval rate is equal to one minus the denial rate). Figure H-12 shows these simulated loan approval rates and compares them to the actual, observed mean probability of loan approval for each group in the NSSBF data set.

Exhibit H-12.
Comparison of Actual Loan Approval Rates to Simulated Loan Approval Rates Under Non-Hispanic, White Male Business Environment for Groups Experiencing Significant Disparities

Group	Loan Approval Rates		Disparity Index (100 = parity)
	Actual	Benchmark	
African Americans	50.1%	78.3%	64
Hispanic Americans	51.6%	83.9%	62

Source: BBC Research & Consulting analysis of 1998 NSSBF data.

Based on the NSSBF data, African American-owned firms that applied for loans were denied at a rate of nearly 50 percent. Model results show that African American-owned firms would be denied loans about 22 percent of the time if they were denied at the same rate as similarly situate firms owned by non-Hispanic, white males. Hispanic American-owned firms would be denied about 16 percent of the time. The actual loan denial rate for Hispanic Americans who applied for loans is 48 percent.

Bid Capacity

One of the requirements for BBC to consider a firm to be "available" for a Caltrans project in BBC's disparity analysis is that the firm had previously bid on, or been awarded, another contract or subcontract of similar size. The study team considers the largest previous bid (or award) by a firm to be the measure of its "bid capacity." The following analysis considers whether there is evidence of disparities in bid capacity for minority- and women-owned firms in the California construction and engineering industries.

The study team conducted an extensive survey of California transportation construction and engineering firms, which is described in Appendix C of the report. The team attempted to contact every establishment located in California in the relevant lines of business. After narrowing the sample to firms in pertinent lines of work with appropriate experience and interest for Caltrans projects, and compressing multiple responses from multi-establishment firms in California into single firm observations, the survey effort produced a database of 3,998 firms potentially available for Caltrans work.[7] The following analysis of bid capacity relies on the results of the Availability Survey.

One of the factors that affects bid capacity is the industry specialization of construction and engineering firms. Some industry segments, such as construction of water, sewer and utility lines, apparently involve larger projects. Other segments, such as landscape architecture and surveying and mapmaking involve smaller scale assignments. One way of controlling for variation in bid capacities in different sub-industries is to assess whether or not a firm has a bid capacity above or below the median level for firms in that sub-industry. BBC can then test whether minority- and women-owned firms bid on larger or smaller contracts or subcontracts compared with other firms in their sub-industry.

[7] See Appendix C, pages 8 and 9 for further description of the survey sample and process.

Figure H-13 indicates the median bid capacity among California-based establishments in each of the 18 industry segments within the construction and engineering industries. Note that the survey questions regarding the largest project that firms had bid on or been awarded captured data in dollar ranges rather than specific dollar amounts.

Figure H-13.
Median Bid Capacity by Industry Segment

Industry Segment	Median Bid Capacity
Highway construction and concrete work	Over $500,000 to $1 million
Asphalt and concrete supply	Over $100,000 to $500,000
Structural steel erection	Over $100,000 to $500,000
Wrecking and demolition	Over $100,000 to $500,000
Electrical work	Over $100,000 to $500,000
Construction sand and gravel	Over $100,000 to $500,000
Heavy construction equipment rental	Over $100,000 to $500,000
Excavation and drilling	Over $100,000 to $500,000
Water, sewer and utility lines	Over $1 million to $2 million
Trucking	Over $100,000 to $500,000
Testing services	Over $100,000 to $500,000
Landscape architecture	$100,000 or less
Surveying and mapmaking	$100,000 or less
Engineering	Over $100,000 to $500,000
Construction management	Over $500,000 to $1 million
Transportation consulting and planning	Over $100,000 to $500,000
Environmental research, consulting and remediation	Over $100,000 to $500,000
Archeological expeditions	Over $100,000 to $500,000

Source: BBC Research & Consulting, 2007.

Firms with bid capacities above the median for their industry segments are counted as available for larger Caltrans projects than most of the firms in their line of business (as well counted as available for smaller assignments). Thus, these firms figure more prominently in the availability analysis than firms with smaller bid capacities. An initial question is whether or not minority and women-owned firms are as likely as majority owned firms to have above average bid capacity for their industry segment. Figure H-14 compares the proportions of firms with above average bid capacity by ownership.

Figure H-14. Proportion of Firms with Above Average Bid Capacity by Ownership

Source:
BBC Research & Consulting, 2007.

Firm Ownership	Proportion With Above-Median Bid Capacity	
	Construction	Engineering
African American	29.4%	39.3%
Asian-Pacific American	57.1%	31.6%
Subcontinent Asian American	11.1%	45.9%
Hispanic American	33.2%	47.9%
Native American	38.2%	26.7%
Female	36.1%	28.6%
Majority-owned	41.3%	34.7%
All Firms	**39.5%**	**34.7%**

The results shown in Figure H-14 indicate that, in aggregate, the proportion of minority and women-owned businesses with above median bid capacity slightly lower than the proportion of firms owned by non-Hispanic, white males that have above median bid capacity for the construction industry. For the engineering industry, the proportion of firms with above median bid capacity is the same for minority- and women-owned firms (in aggregate) as for majority-owned firms. There are, however, differences in the proportions of firms with above median bid capacity for individual groups, such as African Americans or Hispanic American.

BBC then considered whether neutral factors account for differences among groups in the probability of having above median bid capacity and if there are statistically significant disparities in bid capacity after accounting for neutral factors.

There are a number of variables from the Availability Survey that may be correlated with bid capacity. Annual revenues, number of employees and, potentially, whether or not a firm has multiple establishments in California, are examples. However, the direction of causation for these variables is unclear. Do firms have greater bid capacity because they have more employees, or do they have more employees because they bid on and win larger assignments?

After considering the array of variables from the Availability Survey, the study team determined that the neutral factor that might best explain differences in bid capacity while being truly exogenous to that capacity was age of the firm. Theoretically, the longer firms are in business, the larger the contract or subcontract they may pursue.

To test this hypothesis, the study team conducted separate logistic regression analyses for the construction and engineering industries to determine whether or not bid capacity could be at least partly explained by the age of the firm and whether or not minority- and women-owned firms differ from majority-owned firms of similar ages.

Bid capacity results for the California construction industry. Results for the California construction industry are shown in Figure H-12, below. The logistic regression model indicates:

- The age of the firm is a significant predictor of having above average bid capacity;
- Any remaining negative differences in the likelihood of having above average bid capacity for minority and women-owned firms were not statistically significant; and
- Construction firms owned by Asian-Pacific Americans are significantly more likely to have above average bid capacity than other firms in their sub-industries.

Figure H-15. California Construction Industry Bid Capacity Model

Note:
*Significant at 90% confidence level.
**Significant at 95% confidence level.

Source:
BBC Research and Consulting, 2007.

Variable	Coefficient	Wald-statistic
Constant	-0.904	75.00 **
Age of firm	0.020	40.36 **
African American	-0.362	1.31
Asian-Pacific American	0.963	7.48 **
Subcontinent Asian American	-1.381	1.68
Hispanic American	-0.182	1.27
Native American	0.185	0.26
Female	-0.113	0.63

Bid capacity results for the California engineering industry. Results for the California engineering industry are shown in Figure H-16, below. The logistic regression model for this industry indicates:

- The age of the firm is a significant predictor of having above average bid capacity for engineering as well as construction;
- Any remaining negative differences in the likelihood of having above average bid capacity for minority and women-owned firms were not statistically significant; and
- Engineering firms owned by Subcontinent Asian Americans and Hispanic Americans are significantly more likely to have above average bid capacity than other firms in their sub-industries.

Figure H-16 California Engineering Industry Bid Capacity Model

Note:
*Significant at 90% confidence level.
**Significant at 95% confidence level.

Source:
BBC Research and Consulting, 2007.

Variable	Coefficient	Wald-statistic
Constant	-1.285	107.42 **
Age of firm	0.027	42.03 **
African American	0.499	1.56
Asian-Pacific American	0.037	0.02
Subcontinent Asian American	0.698	4.15 **
Hispanic American	0.791	10.11 **
Native American	-0.128	0.05
Female	-0.213	1.46

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APPENDIX I.
Anecdotal Report—Summary of Anecdotal Interviews and Public Hearing Testimony

INTRODUCTION AND BACKGROUND

This report sets forth anecdotes from personal interviews conducted by Holland & Knight, LLP relating to the contracting and procurement procedures and the DBE Program administered by the California Department of Transportation ("Caltrans"). Nearly one-hundred (100) interviews were conducted with participants including prime contractors, subcontractors, suppliers, professional consultants, engineers, professional service providers, official representatives from multiple trade associations, having a membership base comprised of thousands of minority, non-minority, female, and male business owners, and Caltrans officials and staff.

Businesses interviewed included those that are exclusively or primarily a prime contractor, exclusively or primarily a subcontractor, and some that are both a prime and subcontractor. The interviewees include minority-owned businesses, female-owned business, and non-minority, male-owned businesses. The interviewees are located throughout the State of California.

Potential interviewees were obtained from a random sampling of businesses generated by BBC Research and Consulting and stratified by procurement category and ethnicity/race and gender. All of the businesses who agreed to participate were interviewed. Most of the interviews were conducted with the president, CEO or an officer of the business, and some were conducted with a company representative. As each interviewee was scheduled, the business was assigned a number. The interviewees are referenced and identified in this report by their interview number.

The following trade associations agreed to be interviewed and provided anecdotes that are described throughout this report:

1. Asian Business Association (ABA) [1]
2. Black Business Association[2]
3. Society of Hispanic Professional Engineers (SHPE)[3]

[1] The Asian Business Association (CATA #1) is a trade organization that has been existence for over 30 years, and has between 300 and 400 members who are small business owners, primarily in Asian communities.

[2] The Black Business Association's (CATA #2) was established in 1972 and has a total membership of approximately 2,500.

[3] The Society of Hispanic Professional Engineers (CATA #3) was founded in Los Angeles, California, in 1974 by a group of engineers employed by the City of Los Angeles. Their objective was to form a national organization of professional engineers to serve as role models in the Hispanic community.

4. Asian American Architects & Engineers, San Francisco Chapter (AAAE) [4]
5. American Subcontractors Association California, Inc., San Francisco Chapter [5]
6. Engineering & Utility Contractors Association[6]
7. Filipino American Society of Architects & Engineers, Southern-CAL (FASAE)[7]
8. Hispanic Contractor's Association[8]
9. Consulting Engineers and Land Surveyors of California (CELSOC)[9]
10. Asian American Architects/ Engineers Association[10]
11. National Association of Minority Contractors – Southern California Chapter[11]
12. California Community Connection[12]

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[4] The Asian American Architects and Engineers of San Francisco (CATA #4) is a trade association for Asian architects and engineers, most of whom are the owners of their companies. The Association has been in existence for 29 years. Members work in the public and private sector. About one half of the association's members work in the transportation industry and are capable of working for Caltrans. Approximately 5 to 10 out of 80 of the association's members have done work for Caltrans, and another 1/3 of the members are certified as DBEs with Caltrans.

[5] American Subcontractors Association of California, Inc., San Francisco Chapter (CATA #5) is a trade association specifically for construction subcontractors and suppliers. There are 70 members in the San Francisco Chapter, with hundreds of members throughout California. Roughly, 30-40% are minority or female owned. Roughly, 10% of their work is on Caltrans projects.

[6] The Engineering and Utility Contractors Association (CATA #6) is made up of 400+ union-affiliated contractors and associate heavy engineering firms throughout California who employ over 25,000 workers. Its contractors work all over the western United States, but mainly in Northern California. With regard to operations, its members work as both prime and subcontractors, and in both the public and private sectors.

[7] The Filipino American Society of Architects & Engineers, Southern California Chapter (CATA #7) is a professional organization of individuals of Filipino descent who have been educated and trained as architects and engineers, or in related fields of academic study. Membership in the organization, however, is open to all other individuals who are not of Filipino ethnicity. The association maintains offices in California and Guam, and its members work primarily in the private sector. The organization has about 200 members in California, and most of its members are not the owners of their companies, rather, they are employees of majority-owned companies.

[8] The Hispanic Contractors' Association (CATA #8) is a San Francisco-based trade association. The association currently as 13 members.

[9] The Consulting Engineers and Land Surveyors of California (CATA #9) is a 50-year-old, non-profit association of private consulting, engineering and land surveying firms. Some of the organization's 1,100 member firms are DBE certified, although that information is not tracked. In the public sector, approximately 70% of their members are subcontractors; the rest are prime contractors. The organization's member contracts are split 50/50 as between private sector and public sector, with half of that public sector work belonging to Caltrans. The average size of a member firm is eight (8) employees.

[10] The Asian American Architects/Engineers Association of Southern California (CATA #10) is a trade association for Asian architects and engineers with approximately 200 members. The members work in the public and private sector, usually as subcontractors. 30% of their members who do Caltrans work is attributable to their DBE certification.

[11] The National Association of Minority Contractors, Southern California Chapter (CATA #11) is a non-profit trade association, established in 1969. The Southern California chapter has 60 members, not including suppliers and their major corporate supporters. The local chapter's members include African Americans, Asian Americans, Hispanics and Native Americans, about 50% of who are certified with Caltrans. The organization's members work in both the public and private sector.

[12] The California Community Connection Corporation (CATA #12) is a trade association representing African American businesses. It has been in existence for over five years and works with approximately 300 to 400 businesses in the Los Angeles area. These businesses deal mostly with the government (city, county, state, and federal), and work some in the private sector as well.

In addition, included in this report are a summary of the testimony provided by businesses, trade associations, and other organizations at the fourteen (14) Public Hearings (P.H.) held by Caltrans in March and April of 2007 in Los Angeles (2), Eureka, Stockton, Bishop, Fresno, San Luis Obispo, San Diego, Sacramento, San Jose, Redding, Irvine, San Bernardino and Oakland. Attendees at these Public Hearings were asked to relate their experiences concerning, but not limited to:

- Whether or not firms face difficulties or barriers when bidding as prime contractors, subcontractors, or suppliers;
- Whether or not business owners believe they have been treated fairly or unfairly based on their race, ethnicity, or gender;
- Whether or not prime contractors solicit or fail to solicit bids or price quotes from DBEs on non-DBE goal projects, non-government contracts and;
- Whether or not there is a level playing field for firms in access to capital, bonding, insurance and in prompt payment.

Also included in this report is written testimony submitted by multiple contractors in connection with the Caltrans Public Hearings.

This report includes summaries of anecdotes or perceptions regarding: certification; public and private sector work; Caltrans bidding process; experience working with Caltrans; the Caltrans DBE program, perceived barriers to participation with Caltrans; experiences with payment; experience regarding DBE utilization after May 2006; the existence or non-existence of barriers in the public and private sector; race, ethnicity and gender; participation in and awareness of race, ethnic, and gender neutral programs; and recommendations by the interviewees. The anecdotes gathered in this report provide a summary of the perceptions from minorities, women, and non-minority male contractors regarding their experiences with Caltrans and the Caltrans DBE Program.

Summary of Anecdotes

Certification

Certification process.

The minority and female-owned businesses interviewed that were not certified provided reasons for not becoming certified. These reasons included that the process was too cumbersome, their certification had been denied, they saw no value to certification, were unaware certification existed, or they did not know how to become certified. Interviewee #54, a Hispanic male-owned firm, said he had no experience with Caltrans' certification process and did not know how to go about finding information on certification.

Most certified interviewees described the certification process as long and difficult. Interviewee #1, a Native American male-owned firm, said it was "difficult" to get certified. He said it took about six months "and that was after I submitted extensive really thick applications." He said it would be nice if the process was shorter, and noted that the people at Caltrans told him that they were understaffed. He said the application was straightforward although they required a lot of information. Interviewee #5, a white female-owned firm, characterized the process as "a mess." Interviewee #19, a

Hispanic male-owned firm, stated that getting certified "took an act of God," including a birth-certificate, various of proof of ethnicity, pre-signed papers and more to prevent falsification of DBE companies. Now, according to Interviewee #19, it is easier because of the reciprocation process.

A female-owned DBE who testified at a public hearing in Stockton stated that she certified through the California Uniform Certification Program (CUCP) and "it took about six months." "I had a stack of paperwork, maybe an inch. This is what we wound up having to put together for Caltrans to prove that I was a 51 percent owner of the company." She described the process as "repugnant" stating "I had to fully disclose all of my financials, plus all of my husband's financials." "Three years later we had to redo the whole thing all over again." "We made the decision not to pursue" recertification. (P.H. Stockton, 3/20/07).

Interviewee #33, a Hispanic female-owned firm, said that the Caltrans certification process "is okay" but felt Caltrans staff was "non-responsive." She often had to remind Caltrans of certain paperwork and that she was waiting for a response on something she had given to Caltrans three (3) months before the interview. She said delays by Caltrans in processing the company's certification and the company's name change caused problems, since it had to explain to other contractors that the company is certified as both an MBE and a WBE, but that Caltrans was behind on the paperwork.

CATA #2, an African American trade association, stated that the DBE certification process had been "fairly easy" for his personal business, but that he had to struggle with Caltrans to get the agency to recognize a category of petroleum supplier. He also said that the process is perhaps too intrusive, as Caltrans asks for things like the businesses' bank signature cards. Interviewee #56, a white male-owned firm, worked on certifications for his prior company, filling out recertification forms every year. He is familiar with the Caltrans certification questions and recalls the process being "lengthy." CATA #6, a trade association representing heavy engineering contractors, assisted one contractor in getting certified. She said it took that person over a year and number of trips to the Civil Rights Office, numerous phone calls that were never returned, and a thorough investigation of her financial background. The trade association representative described it as a very long, personal invasive process. According to CATA #6, the process discourages minorities and females from becoming certified.

Interviewee #27, an African American male-owned firm, felt that Caltrans certification process was "getting better." Apparently, the company was "in limbo" for "years" because it "took [Caltrans] forever" to get the company's recertification done. However, during this period Caltrans still allowed them to bid as a DBE. Interviewee #27 felt that Caltrans had since "improved some" and that "right now they seem to be on top of it."

Some businesses reported that the certification process is expensive. A certified African American female consulting firm stated at a public hearing in San Diego that "in order to get certified … they need a CPA … if you look at the certification document … it's hairy … I know people that own firms that simply refuse to get certified, and their attitude is that … why should they subject themselves to that kind of exposure in terms of their financial information when firms that are owned by non-minority or non-ethnic groups are not required to do that? … if there's no payoff at the end of a cost … it doesn't make a whole lot of sense." (P.H. San Diego, 3/22/07).

At a public hearing in Los Angeles, a DBE consulting firm testified that the paperwork involved in certifying as a DBE or SBE is extensive. "I'm guilty of that myself because to this day, I haven't filled

out the paperwork to" become an SBE. But "if you push through the paperwork, you can take advantage of the programs." (P.H. Los Angeles, 4/4/07).

Several interviewees offered experiences with recertification. Interviewee #31, an African American female-owned firm, stated that the recertification was "burdensome," "cumbersome," and "slow." She stated that the company has been certified for a long time and that "being recertified should not be the issue that it is."

Interviewee #46, an Asian American male-owned firm, expressed frustration with the re-certification process, saying that this process involves "a lot of work," and indicating that it is rather difficult to find someone with whom he can speak in person and find out the status of his re-certification application. According to Interviewee #46, "you don't even really know what phone number to call anymore. You're always on hold. You don't really know where to begin. You just send your package in. You don't know if they've received your package or not." Interviewee #39, a Hispanic male-owned firm, stated that the recertification process was not "too bad" and said that the documentation and paperwork required "was not a huge problem." He recommended that Caltrans check-up and make sure that the people who are claiming DBE status "actually deserve the classification." Interviewee #57, an Asian American male-owned firm, notes that the certification process is "good" and "streamlined." He stated that the first time the process was burdensome, but that afterwards, it was mostly easy.

An African American female-owned firm who testified at a public hearing in Los Angeles stated, "I think there was some type of form that I needed to submit or a letter I needed someone to write to verify that I am an African American. I would think that a passport would be good enough for that." She described the process as "painstakingly long and tedious." (P.H. Los Angeles, 3/29/07).

Interviewee #8, a Hispanic male-owned firm, stated that "CUCP is a problem" and that "[i]t was pretty hard to do." According to Interviewee #8, he received recertification paperwork telling him he had to reapply within 10 days of the letter's date even though he did not receive the letter until 3 or 4 days after it was dated. He said that he has called the person with whom he had originally spoke at the CUCP, but that he "cannot get a hold of her to save [his] life," and that "she doesn't return phone calls." Interviewee #8 suggested that the DBE certification process could be improved by CUCP's establishing more branch offices so that businesses could visit them in person.

Most interviewees felt the certification process was ultimately fair. Interviewee #2, an African American male-owned firm, felt that registration as a DBE was time consuming, detail-oriented, but ultimately even-handed. On balance, he was glad that there was a lot to the process because this helped to keep out people who did not belong. His fear was that if it was too easy to get in, then there would be much more abuse and fraud. Given that he really was a minority-owned small business, he did not have any problem with having to prove this to Caltrans. Interviewee #46, an Asian American male-owned firm, stated that there was an "insurmountable" amount of paperwork required in order to become certified, but in the end he felt that this was "a good deal" because "it keeps . . . people that probably aren't deserving or just everybody from getting it." Interviewee #47, a white male-owned firm, has heard from minority subcontractors that the process is fairly smooth. His company has assisted DBEs in becoming certified and believes it is a fair process.

CATA #1, an Asian American trade association, thought that Caltrans' certification process was fair and that there is "no handicap in that process." He said that Caltrans had "substantially" improved upon the time it takes for businesses to get certified, shortening the time period from six months to a month or a month and a half. In his opinion, if Caltrans could further shorten the process, that would be even better.

Interviewee #4, a Native American male-owned firm, stated that the persons with whom he worked at Caltrans when dealing with certification process were "very helpful," and that it took about the same time and effort as it did to bid a job. Interviewee #81, a Hispanic male-owned firm, found the Metropolitan Transportation Authority (MTA) certification process to be fair. It was a tough process, but he expected it to be. He was lucky in that he had a very competent person from MTA guiding him through the process.

Some Interviewees described the Caltrans certification process as simple and straightforward (Interviewees #3, #10, #20, #21, #22, #23, #29, #48, #51, #59, and #61). Interviewee #3, an Asian American male-owned firm, believed the process was "pretty simple and straightforward." Interviewee #59, an African American male-owned firm, stated that it was a streamlined, straightforward process. Interviewee #61, an Asian American male-owned firm, stated that the Caltrans certification process is easy and that the turnaround time is quick. He did not find it to be overly burdensome. It took Interviewee #20, an Armenian male-owned firm, only one month to receive DBE certification. Interviewee #21, a Hispanic male-owned firm, stated that that the certification process is fairly simple now because they have been certified for so long. Interviewee #22, an African American male-owned firm, stated that the company had no problems getting certified as a DBE, noting the getting certified with Caltrans is easier than figuring out how to work with Caltrans. Interviewee #29, a Hispanic male-owned firm, described the experience at “actually very good." He had the Los Angeles City certification, and under the reciprocity process, he was certified within a day or two.

Interviewee #51, a Hispanic male-owned firm, stated that he had had no problems with the Caltrans (or now the CUCP) certification process and that the paperwork "is simple enough if you sit down and do it." He thought that perhaps some people had problems because they do not understand what they are reading or do not take the process seriously. He said that recertification had not been a problem either, since the company had been in the ownership of his family for its entire thirty-five year history. He stated that though the Caltrans investigating process needs to be strong in order to discourage people from abusing or taking advantage of an idea that is "to help those people less fortunate that have the desire to work and want to improve their lives, . . . to do it on paper and complicate life by creating bureaucracy is certainly not the answer to anything."

Some interviewees expressed confusion over the interplay between Caltrans and other agency certification processes. Interviewee #67, a white female-owned firm, indicated that her experience with the DBE certification process was confusing and frustrating. According to Interviewee #67, she was first contacted by Caltrans and the Department of General Services regarding their DBE and WBE programs ten years ago. Five years later, she said, her file was sent down to Los Angeles from Sacramento. Next thing she knew, she was talking to people from the CUCP, who tried to explain the new "umbrella system." She is confused as to why she still received notices from Caltrans. Also, someone at Metropolitan Water District (MWD) said it had their own certification system, which Interviewee #67 believes is part of a network that includes the Port of Long Beach and the San Diego School System. Interviewee #67 stated that she sent written questions to a representative at Caltrans

regarding CUCP. Someone from Caltrans called her and explained that Caltrans certification process was now folded into CUCP, but she is still confused.

She attended a Caltrans workshop in Oakland in the fall 2001 where only three people stood up to say that they were DBE certified. At the workshop, Caltrans had tables set up so that firms could register on-site for DBE certification. Interviewee #67 was angered that she had put in so much time to get certified while other firms were allowed to register through what she perceived as an "instant DBE session." Interviewee #67 suggested that Caltrans could improve its certification program through better communication.

Some interviewees expressed frustration related to denial of certification. Interviewee #6, a white female-owned business, stated that the company applied for DBE certification in the early 1990s. The company was originally owned by Interviewee #6's father, but after his father passed away, ownership was transferred to his mother. The company submitted an application consisting of a 3-ring binder to Caltrans, but, according to Interviewee #6, a Caltrans employee simply disregarded it and "threw it away." The company wrote a letter to Senators Diane Fienstein and Barbara Boxer complaining about the situation. Interviewee #6 felt that Caltrans "made a mockery" of his mother and him, since they spent months putting the application together and received back only an empty binder. The company has not sought DBE (or similar) certification with any other agencies. Interviewee #50, a white male-owned firm, tried to certify his business as a WBE. At the time, there was a requirement that if his wife owned less than 51% of the business, one had to show exactly what tasks she performed. So, Interviewee #50 changed the ownership of the business to be 100% in his wife's name, but the process was simply too complicated and he ultimately said, “forget it.” He had a lot of business at the time, so he decided there was no need to get certified.

Interviewee #68, a self described "mixed-race" male-owned business, was refused certification by Caltrans even though his mother's birth certificate identifies her as "colored." A person at Caltrans told him that he did not qualify for DBE certification because he did not "live [his] life as a Black man." According to Interviewee #68, this person could not define for him what this phrase meant, and was "very racist.” Interviewee #68 said that he argued with this person and eventually got his local Congressional representative involved, but that he later let it go because he understood that having DBE certification would not help his company get work.

Interviewee #63, a white male and female co-owned business, was denied certification because the name of the business suggested it was owned by the husband. The denial took 1.5 years to be decided. They were told they could appeal but they let it go.

One witness expressed frustration due to being unjustly decertified. A decertified DBE stated that they have been decertified unjustly and “there should be a study done on the agencies who [are] allow[ed] to misuse their authority to certify firms – or decertify, in our case.” (Written testimony submitted 3/21/07).

Perceived value of certification.

Some DBEs recognized a value to certification. CATA #12, an African American trade association, is also the sales manager of a business owned by an African-American woman that sells office products/supplies and computers (and of which he used to be the owner). He attributed "quite a bit"

of the company's business to its DBE status, stating that the DBE program works as an advantage because business is business as usual and business as usual is usually the good ole' boy system.

A WBE submitting written testimony stated: "I put a lot of my success on having the WBE status and being involved in the various associations [NAWIC and AGC of San Diego]." (Written testimony submitted 1/26/06).

A certified DBE submitting written testimony stated it did not start receiving inquiries and unsolicited requests for proposals until after it received its Caltrans certification, and, only then, on DBE participation goal contracts. He stated: "The program certainly has enhanced our firm's ability to enter and achieve some degree of success in the public sector contracting market." (Written testimony submitted 4/12/07).

Some DBE firms questioned the value of certification based on the fact they had not received any more work after becoming certified. Interviewee #13, a Pakistani male-owned firm, has been "pretty successful" in the public sector, but not with Caltrans. Interviewee #13 stated, "Despite all the effort and money spent getting DBE certification [from Caltrans], I have not received to the best of my memory any direct contract from Caltrans. I have responded to their RFPs. I'm a very qualified person, and my company [is] very qualified, but I don't know why we don't get work from Caltrans."

Interviewee #31, an African American female-owned firm, questioned whether the DBE certification process was worthwhile, considering the amount of work that his firm and others receive as a result of being certified – "What is the benefit of being certified by Caltrans or by any other agency when they are not promoting utilization anyway?"

CATA #3, a Hispanic trade association, stated that the DBE certification process consumes a lot of a businesses' time and resources because of the paperwork and documentation required. "Not too many people want to be DBEs anymore . . .," said CATA #3, because of the process and/or because they are not aware of any need to. He said that more of the association's members would get certified if being certified and participating in the program were more rewarding.

CATA #7, a Filipino trade association, reported that only about ten of their 200 members are certified as DBEs with Caltrans.[13] Historically, the program does not work, "it's a lip service." Major primes team up with the same firms over and over and they do not reach out. Nonetheless, he feels there is value in certification. It opens some doors. CATA #7 is glad to see more unification with the certification process. Small businesses do not have the resources to get certified with multiple agencies.

A female-owned DBE testified at a public hearing in Eureka "it was approximately five years ago that I applied to become a DBE." She was asked to certify to help the prime on her project meet the goal. She stated, "Since that time, I've probably been contacted I would say four times by contractors looking for a DBE on a project. And usually it's … for some engineering services on a proposal that was due in a very short period of time. So it really wasn't even anything that I could respond to." "I really haven't gotten any work because of being a DBE." (P.H. Eureka, 3/20/07).

[13] Note most of the 200 members are not owners of their companies but rather employees at other firms.

A white female-owned DBE testified at the San Luis Obispo public hearing that she let her certification expire. "We made the decision then not to go forward, because, in our minds, we weren't getting any benefits at all from Caltrans … We did not feel that, even though I'm a female, that we had any barriers against the bidding process because we're getting the work anyway." (P.H. San Luis Obispo, 3/20/07).

A small DBE information technology consulting firm who testified at a public hearing in Los Angeles stated: "If this program was a requirement, we would see return on the hundreds of hours that we've spend being awarded the DBE. It would be easier to market our DBE. We wouldn't be used to win work" and "cut" later by the prime contractor. "Again, we strongly believe that if DBE is a requirement and not just a goal, the purpose for which it was designed, for highly qualified firms like ours to get our foot in the door – would be worthwhile." (P.H. Los Angeles, 3/29/07).

An African American consulting firm, testifying at a public hearing in San Diego, did not see the value in certification, "the idea of having to fill out more paperwork or more documentation, it just wasn't worth it … if you go through the hoops to get certified … they just weren't paying any attention to you." (P.H. San Diego, 3/22/07).

A Hispanic female-owned consulting firm stated, at a public hearing in Los Angeles, "most DBEs said they don't have interest in maintaining [certification] … because they were inundated with faxes and calls that did not materialize into any real opportunity." (P.H. Los Angeles, 4/4/07).

A minority female-owned business testified at a public hearing in San Bernardino that the company has not received work in the public sector since certifying six months ago. "We check the various agencies' web sites regularly, we read the newspapers, and any time we hear a proposal that fits what we do then we submit our bids for those, and we've gotten none out of four or five." (P. H. San Bernardino, 3/20/07).

Some DBE firms explained that having certification can act as a barrier as opposed to a benefit due to assumptions that DBE firms who seek certification are less qualified. Interviewee #43, a Native American male-owned firm, believes that some of those he has interacted with recently have shied away from doing business with him due to his certifications. He suspects that it may be the case that minority-certified businesses' work could be perceived as being of lower quality, or that businesses are reluctant to engage with them because they have been "burned" by DBEs in the past. Similarly, Interviewee #59, an African American male-owned firm, stated that DBEs are perceived as not being qualified to do work and this has a tangible effect on the award of projects. CATA #1, an Asian American trade association, stated that he had no personal experience with stereotyping but heard comments by a federal agency employee (from the Small Business Administration) seven or eight years ago that "DBE" was synonymous with "not qualified."

Interviewee #7, a white female-owned surveying firm, said that "there's definitely a stigmatism with being a DBE because it automatically gives the impression that you're new, [that] you don't have any experience, and that there's a risk in hiring you . . . ." She stated also that this stigmatism is "really hard" for them to offset, and that "[u]nless there is a [DBE] goal on a project, we do not tell anybody that we're DBE or minority-owned because of the stigmatism associated with it."

Recommendations regarding the certification process.

Some interviewees would like to see unification of certification among different entities. Interviewee #32, an Asian American female-owned firm certified through the CUCP, recommended standardizing the certification process. She described "[a]ll of those certification processes" as being "so long" and said that "[i]t would be great if it was standardized." She said that a lot of paper was wasted and that she did not see a need to be certified, as she put it, "by the feds and by the state and by this agency and that agency. It's ridiculous." She also noted that it was expensive for small businesses to get certified, saying that it costs on average $500 each time.

Similarly, Interviewee #14, a white male-owned firm, recommended one certification for all local agencies and Caltrans. This would reduce certification-related costs and insure consistent application of the rules. Interviewee #14 stated that differences between programs made compliance expensive and needlessly complicated. With one certification the company would only have to know how to operate in one system rather than many. He suggests that the MTC develop a region-wide DBE program that all the local agencies would then adopt.

A small DBE information technology consulting firm who testified at a public hearing in Los Angeles stated: "The largest challenge I had with [certification] was when the transition happened. I have three certifications. When the central unified came in, it wasn't clear if it covered WBE, SBE, and DBE. Those certifications expired at different times as well. So I was very nervous and very concerned at that time that I was covered." (P.H. Los Angeles, 3/29/07).

At a public hearing in San Diego, an African American DBE consulting firm expressed frustration that "there is so many different agencies you have to potentially get certified with – and then too, you have to maintain them." (P.H. San Diego, 3/22/07).

Some interviewees suggested fewer requirements upon recertification. While waiting for recertification, Interviewee #31, an African American female-owned firm, was being considered as a potential member of Caltrans project design teams. Interviewee #31 suggested that Caltrans could improve its recertification process by requiring only that businesses submit a certified affidavit saying that nothing had changed regarding a company's ownership. Interviewee #49, an African American male-owned firm, said that the Caltrans certification process was "a little difficult" and that "some of the things that they . . . ask for . . . went a bit farther that was needed . . . ." He also said that firms had to "turn around and do the same all over again, which, if there had been no change, should be unnecessary." His only recommendation for improving the process was to allow businesses to certify that their business ownership and the like has not changed in the past year (or whatever the renewal period may be).

Some interviewees would like help becoming certified (Interviewees #8, #46, and #81). Interviewee #46, an Asian American male-owned firm, who expressed considerable confusion over the certification process, suggested that Caltrans have outreach personnel that contact companies by their type of work (e.g., electrical engineering companies) or by name (e.g., company names that begin with certain letters of the alphabet). A small DBE information technology consulting firm who testified at a public hearing in Los Angeles stated: "I think many, many people are still very confused about the certification process … I usually wind up having to explain it to the primes. They don't know the difference between an SBE, a DBE." (P.H. Los Angeles, 3/29/07).

One trade association suggested that Caltrans require all businesses to obtain certification before working with Caltrans. CATA #2, an African American trade association, believes the DBE certification process is unfair because only DBE firms are required to be certified. DBE firms have to spend precious time and resources dealing with paperwork and a process that non-DBE firms do not have to deal with. CATA #2 suggested that in order for the program to be administered more fairly, all businesses should be required to be certified – whether as a DBE or a non-DBE firm – before they can do business with Caltrans. That way, said CATA #2, the certification program has integrity.

One trade association suggested streamlining the certification process. CATA #3, a Hispanic trade association, suggests Caltrans allow businesses to self-certify with a one page form and impose fines and/or imprisonment as punishment for false reporting. He said that though someone would have to enforce this regime, he thought that it might be more cost-effective for both the agency and applicants than the current, paper and time intensive system.

One witness testified that it would like to see more aggressive percentage requirements for major consulting firms who contract with DBEs and WBEs. A certified WBE / DBE stated: "It would be very helpful if the certification program here in California was more aggressive in the DBE/WBE percentage requirements when contracting out design work and in linking up major consulting firms with the smaller minority and women owned businesses." (Written testimony submitted 3/14/07)

Public and Private Sector Work

All the interviewees were asked to relate their experiences, perceptions, and anecdotes in connection with public and private sector work opportunities.

DBEs as prime contractors.

A majority of the minority or female-owned businesses work primarily as subcontractors. These businesses offered a variety of reasons for working primarily as subcontractors, including that they were too small to bid as primes, that they preferred to work as subcontractors, and that they could not afford the capital expenditures required to be a prime contractor.

Many interviewees only knew of a few DBE primes working in the public sector and few could recall ever having worked with a DBE prime. Interviewee #17, a white male-owned business, stated there are "very few" DBE contractors doing public sector work, explaining "[u]sually DBE contractors are small firms, one to ten people. They're not capable of doing large jobs like [those for] Caltrans." Interviewee #66, a white male-owned business, said that he "know[s] a few" DBE firms working as prime contractors for Caltrans and that they hauled rock, sand, and pavement. Interviewee #33, a Hispanic female-owned business, stated that she did not monitor whether any prime contractors working for Caltrans are DBE firms, but her observation was that "most of [her] primes are not DBEs or any BEs at all." Interviewee #34, a white male-owned business, was not aware of and/or could not think of any DBE firms that worked for Caltrans as prime contractors. CATA #1, an Asian American trade association, said there are "some" but "very very few" DBE firms working as prime contractors on Caltrans jobs. This happens only when there is a "major push" in the community and then one or two DBE firms get a small contract as a prime. Similarly, CATA #7, a Filipino trade association, sees very few DBE primes. Interviewee #70, a white male-owned firm, did not know of any DBE prime contractors.

Interviewee #30, an Asian American male-owned firm, observed that if a DBE is able to obtain prime work, it is probably getting bigger and bigger, and eventually the DBE grows out of the program. He knows of a few firms that have successfully graduated, but have had difficulty in maintaining non-DBE status, partly because they got their work due to their DBE status. Once they graduate out, "they're playing with the big boys and nobody wants to pick them anymore," not because they do not do good work, but because they are not DBE to fulfill the goal. Interviewee #30's main core work does not depend on DBE status.

Some minority-owned businesses reported that they are unable to receive prime contracts in the public sector because the jobs are too large. Interviewee #57, an Asian American male-owned firm, has not been successful with large, private projects. He stated that he can work as a prime on the small projects but they are "fillers" that are not as profitable. In the public sector, the work is too large so he works as a team member or a subcontractor for a prime. Interviewee #61, an Asian American male-owned business, functions as a subcontractor on Caltrans work because it is not large enough to function as a prime. As a private engineer for residential customers, the company does design for additions and renovation retrofitting, as opposed to the public sector where the company does engineering and civil project and construction management. More anecdotes regarding the size of public sector jobs can be found at Section III.E.1.

Some DBEs reported working primarily as subcontractors due to financial limitations. Interviewee #81, a Hispanic male-owned business, believes there is a lack of opportunity for small firms in both sectors. The average price range of his contracts in the public sector is $250,000.00. This DBE works primarily as a subcontractor in both sectors because he cannot afford to bond his work. Interviewee #59, an African American male-owned firm, stated that he has functioned as a prime contractor on a couple of airport projects, but that he mostly functions as a subcontractor because he has very few business development dollars. Interviewee #59 leads teams, writes proposals, and organizes workers, but cannot obtain the funding necessary to move to the next level. He feels he does not have the right connections with the banks. Interviewee #19, a Hispanic male-owned business, has "come close" to biding work as a prime, but is not sure the firm is ready. The company does not have a large marketing division, and there is a lot of work involved in putting together a package.

Interviewee #29, a Hispanic male-owned business, tried to do more prime work by forming a limited liability corporation in 2001. He hired people, paid the workmen's compensation, and made sure that he satisfied all the requirements to avoid having the answer that they like him "but [he does not] have this or that." This DBE describes his experience as: "it was expensive and I've never gotten anywhere."

Some minority-owned businesses did not believe there were opportunities for small businesses to act as primes in the public sector. Interviewee #33, a Hispanic female-owned business, stated that the company works most of the time (about 60%) as a subcontractor in the public sector and that on Caltrans jobs it works primarily as a subcontractor to engineers. According to Interviewee #33, the company works as a sub on these jobs because, "Caltrans is very engineering-oriented and generally the engineers like to be in charge," and "everything flows from the engineering contract."

Interviewee #8, a Hispanic male-owned business, felt that his business had been successful in getting work in the public sector, including work for Caltrans, but works 80% of the time as a subcontractor – "it just seems that we get more work as a subcontractor than as a prime contractor."

CATA #3, a Hispanic trade association, stated its members work mostly as subcontractors and he had not seen any Hispanic-owned firms working as prime contractors for Caltrans, at least not in the professional services area. According to CATA #3, few members go after Caltrans work because most members feel that Caltrans' doors are not open and do not believe that work opportunities with Caltrans are anywhere close to what they should be. CATA #3 said that he knew of a couple of non-Hispanic DBE firms doing prime contractor work for Caltrans (a female-owned business that does striping work and business owned by a representative of the Small Business Council).

Interviewee #58, a white female-owned company, functions more as a subcontractor than a prime contractor in the private sector because major companies tend to contract with very large primes and use the same one over and over. Interviewee #58 maintains its competitive position by bidding for the few major primes.

Some DBEs reported that they act as subcontractors because Caltrans or other agencies do not directly contract for their type of work. Interviewee #46, an Asian American male-owned business, works as a subcontractor for Caltrans. His company performs lighting for roadways, fences, and guardrails for Caltrans. Unlike schools that use construction managers to break down their contracts by category of work, Caltrans hires a general contractor for its projects and relies on them to break the work up and subcontract out the smaller jobs.

Similarly, Interviewee #51, a Hispanic male-owned business, said that the company works mostly as a subcontractor in the public sector and on Caltrans projects because of the nature of the work it performs. Caltrans does not award waterworks contracts directly but instead lets the prime contractors subcontract out this work. Along the same lines, Interviewee #31, an African American female-owned business, stated that the type of work the company does in the public and private sectors is "exactly the same," but the company is primarily a prime contractor in the private sector and a subcontractor in the public sector because agencies do not directly contract for utility work.

Interviewee #39, a Hispanic male-owned firm, stated that the company always works as a subcontractor on all of its work because of the nature of the business – the prime contractor buys the steel and other materials and then calls the company to install the steel reinforcement.

Some DBEs report success working as prime contractors in the public sector. Interviewee #1, a Native American male-owned business, has done some work as prime contractor for Caltrans; these projects are fairly small and are local. For example, Interviewee #1 did water testing at a rest area near his laboratory. This contract came through a local Caltrans office. CATA #2, an African American trade association, said there were "quite a few" DBE firms working as prime contractors on Caltrans jobs before the passage of Proposition 209, but they are all out of business now. He said that he knew of only one DBE currently doing prime work for Caltrans, listing an equipment rental company owned by an African American male.

Interviewee #10, an African American male-owned firm, works primarily as a subcontractor in both the private and public sectors, because that is how the business is licensed. The company sometime works as a general contractor in the public sector and has worked as a general contractor for Caltrans. He notes, that in the public sector, he is required to pay his workers more than in the private sector due to prevailing wage requirements. Interviewee #5, a white female-owned business, and Interviewee #9, a white male-owned business, stated that there were “some” DBE primes.

Some DBEs report success working as prime contractors in the private sector. Interviewee #33, a Hispanic female-owned business, who acts as a prime 80% of the time, felt that the company had been successful in getting private sector work, but she noted that private sector work was slower now because a slump in the building and housing market. Interviewee #44, a Middle Eastern male-owned firm, reported success in the private sector working primarily as a prime contractor on contracts ranging from $300,000.00 to 700,000.00. Interviewee #61, an Asian American male-owned firm, reports he is very successful in the private sector and works primarily as a prime. As a private engineer for residential customers, the company does design for additions and renovation retrofitting, as opposed to the public sector where the company does engineering and civil projects and construction management. CATA #9, an association of consulting, engineering, and land surveying firms, stated that in the private sector, most of their members work as a prime doing site-design or surveying or building design.

The representative of CATA #2, an African American trade association, stated that his company works mostly as a prime contractor in the public sector, where he felt that it had been "fairly successful." He said that his company only bids jobs where it can make money and thus does not get as many jobs as his competitors who bid public sector jobs "just to keep the trucks running." Interviewee #5, a white female-owned business, works primarily as a prime contractor for both its private sector and public sector work. Interviewee #5 prefers to work as a prime contractor because it likes to have control over the money and because of the size-driven nature of the work.

Interviewee #49, an African American male-owned firm, stated that he used to do work in the private sector, but that he had shifted entirely to the public sector "a while ago," and now does all of his work there. Interviewee #49 felt that he had been successful in getting work in the public sector and that his company works mostly as a prime contractor there, with the contracts for its jobs going up to $3 million. He said that he knew of some DBE firms working as prime contractors on Caltrans projects but that they were not local firms.

Some interviewees stated that working as a subcontractor allows a firm to avoid bonding and other requirements. CATA #11, a minority trade association, has only one member out of sixty, an engineering contractor, who works as a prime on Caltrans projects. Rather, most of his members act as subcontractors in the public sector. According to CATA #11, it is easier in a sense to be a subcontractor since "you don't have to get a bond … you don't have to go through the bidding requirements, getting a lot of sub-quotes, … all you do is find your scope of work and give your bid to the general contractor."

Interviewee #27, an African American male-owned firm, stated that the company works primarily as a subcontractor in both the public and private sectors, and characterized himself as “successful” in both sectors. According to Interviewee #27, the company works as a subcontractor because he started out as a subcontractor working for some local companies and "just liked the way it was and . . . never changed it." Interviewee #27 stated that "it works" for the company to be a subcontractor because there are a lot of requirements, like bonding and accounting, that they do not have to deal with but which they would have to deal with were they to work as a prime. According to Interviewee #27, the company would probably have to bring in more office help in order to work as a prime.

Interviewee #14, a white male-owned firm, prefers to subcontract for Caltrans because of the cost and effort involved in bidding. It is more convenient to allow other firms to go through that hassle and then to subcontract with those firms rather than to try to be a prime contractor. Interviewee #76, a

white male-owned business, will not bid Caltrans projects as a prime because of all the requirements, in particular the bonding and DBE requirements.

CATA #11, a minority trade association, indicated that most of his members act as subcontractors in the public sector because "you don't have to get a bond … you don't have to go through the bidding requirements (getting a lot of subcontractor-quotes) … all you do is find your scope of work and give your bid to the general contractor."

Anecdotes of DBEs regarding private sector work opportunities.

Most minority and female-owned firms interviewed reported success in the private sector. Almost all of Interviewee #2's work is on private contracts. Interviewee #2, an African American male-owned business, prefers private as opposed to public contracting work because he gets paid faster. The company has stuck to subcontracting rather than bidding as a prime largely because of its focus/specialization on excavation, foundation, and paving work. He stated that he does not solicit work from private contractors. Rather, they come to him because of his reputation for doing high quality work. Interviewee #3, an Asian American male-owned business, reports that the company targets project contracts for $3 million and under in both the public and private sector and has been successful in both arenas.

Interviewee #19, a Hispanic male-owned business, stated that the company has developed an established client base with both private and public entities over the last five years. With private companies, Interviewee #19 stated that the most important factors are cost, efficiency and ability to provide timely service. In the private sector, Interviewee #20, an Armenian male-owned business, explains that he gets all of the jobs by referral and repeat customers. He does not place any ads because over the last sixteen years, he has built relationships with every contractor that he has ever worked for.

Interviewee #22, an African American male-owned business, works extensively in the private sector, although this part of their business has only developed over the past decade or so. Interviewee #22 works exclusively as a prime contractor on their jobs and typically does architectural and landscape work in the private sector for large developments. Interviewee #22 feels that this type of work was harder to break into for minority-owned businesses simply because of a lack of private developer contacts when he started out.

Interviewee #51, a Hispanic male-owned firm, has been successful in getting work in the private sector, where it works mostly as a subcontractor to either prime contractor or a builder-developer. He has chosen to focus on private work for the past three to four years, but said it is difficult for his company to compete against non-union firms in the private sector where there is no prevailing wage requirement. Interviewee #54, a Hispanic male-owned firm, said that he had been successful in trying to get work in the private sector and stated there is "always room for more." He also said that the amount of available work had been declining over the past couple of years, and that this was the case for everyone. He works equally as a prime contractor and subcontractor.

Interviewee #7, a white female-owned surveying company, works primarily as a prime contractor in the private sector. She said that private sector projects are generally broken into smaller jobs. Interviewee #13, a Pakistani male-owned firm, characterized his attempts to get work in the private sector as "pretty successful." Interviewee #42, an African American male-owned firm, stated he is

successful in the private sector because of his good reputation in building and demolition. He works primarily as a subcontractor.

Some minority and female-owned firms reported greater success in the private sector because there is less competition, more profit, greater accessibility, and less bureaucracy. Interviewee #43, a Native American male-owned firm, believes that business in the private sector is generally easier than the public sector. Most of his business is private sector, and their largest projects have been private sector projects. He believes that the marked competition in the public sector tends to drive prices down. The reason most of their work has been private sector is because they are awaiting issuance (within 2 weeks) of certain licensing (the General A Engineering State Contractors License) that he believes "we really need to have . . . before we can function as a prime." Interviewee #67, a white female-owned firm, said that the company works as a prime contractor in both the private and public sectors and that its pricing is done on a set schedule based on quantity. She said that the "private sector is much easier to deal with . . . ." and felt that the company had been very successful in getting work there.

CATA #2, an African American trade association, has been "very successful" in the private sector, which he found to be more accessible than the public sector because there is no bidding involved and the company need only demonstrate the quality of its product and services. He stated that the company's "contracts" in the private sector are actually purchase orders and that the company sells fuel on a quantity basis (by the gallon). CATA #7, a Filipino trade association, stated its members are successful in the private sector. The "experience" criteria in the public sector close the members out of a lot of the public sector opportunities. It is often easier to get work in the private sector and negotiate a fee. And the fees are generally higher in the private sector.

CATA #3, a Hispanic trade association, said that he had been "pretty successful" in his attempts to get work in the private sector, and that the Association's members had also done "pretty well" in the private sector. According to CATA #3, a lot of the members preferred private work to, or simply did not try for, public sector work because government work involves bureaucracy and certifications. CATA #6, a trade association representing heavy engineering contractors, said its members have been successful in the private sector – "Typically, the private sector is more profitable" due to the bureaucracy in the public sector. The more red tape the more expense, "good faith effort is part of that." Interviewee #58, a white female-owned business, has focused on the private work because the projects move faster.

Interviewee #2, an African American male-owned business, prefers private to public projects because of the ability to get a contractor's lien in the event of non-payment for his services on a private project.

Some minority and female-owned companies reported difficulty obtaining work in the private sector. Interviewee #84, an African American male-owned business, went into business as a fuel supplier "because he saw this advantage" in the DBE program. He stated that small fuel suppliers cannot compete in the public sector or the private sector without the government "giving you the opportunity." He has received only one public sector contract and no private sector contracts in the last two years. Due to the suspension of the DBE goals, he is going bankrupt. Interviewee #23, an Asian American male-owned business, has had little to no success in the private sector and believes that this is because private sector projects are not required to support small or minority businesses. Interviewee #31, an African American female-owned firm, described the private sector as "tough,"

particularly in San Diego, and noted that the majority of the firms in their sub-industry were "fairly conservative." Interviewee #59, an African American male-owned business, has been struggling in the private sector, which is why the company is currently down in size. Interviewee #38, an Afghani male-owned business, has had negative experiences working in both sectors.

Interviewee #25, a Hispanic male-owned business, stated that it is "pretty hard" to get work in the private sector. Because his company is small, he said, the big companies take most of the jobs and call his company whenever they need "just a little." He also stated that "I'm surprised we're surviving." The primes pay different prices based on the length of the haul. According to Interviewee #25, "they pay whatever they want. They say, I'll pay this amount and this is it . . . ." He stated that sometimes he attempts to negotiate better rates with these companies, but that "most of the time they don't accept it."

Interviewee #32, an Asian American female-owned business, felt that the company had been largely unsuccessful in its attempts to get work in the private sector, and she attributed this lack of success to developers and other companies using firms with whom they had been working for a long time and having "no incentive . . . to switch."

More anecdotes regarding the good ole' boy network as a barrier to receiving work in the public and private sectors can be found in Section III.I.2.

Anecdotes of DBEs regarding public sector work opportunities.

Experience in the public sector:

Most DBE interviewees, including most minority and female-owned interviewees, reported success in the public sector. Interviewee #21, a Hispanic male-owned firm, has years of Caltrans experience, but on a day to day basis, most of its work is in other public agencies, doing repairs of paving and road improvement work. Interviewee #22, an African American male-owned firm, works for a wide variety of local public agencies including BART, MUNI, the City of Oakland, and the San Francisco Airport Commission. The company has successfully won contracts as a prime on numerous occasions. The business developed first because of his contacts in government, acquired while in college, and because of help from his father.

Some DBE interviewees believed their success in the public sector was related to their status as a DBE, others did not believe certification accounted for their success. Interviewee #19, a Hispanic male-owned firm, believes that about 10-15% of their work (about 1/2 of the public projects) is directly related to its DBE status of their public work. He notes that none of their private work is attributable to their DBE status, rather in the private sector the most important factors are cost, efficiency and ability to provide timely service. To the contrary, Interviewee #29, a Hispanic male-owned firm, who acts primarily as a prime and works almost exclusively in the public sector, feels that he has not received any work due to the DBE certification. A white female owned firm stated that prime contractors do not “normally” solicit bids from DBEs. “We are only asked to be on the team if there are DBE requirements by the owner.” (Written testimony submitted 3/26/07).

More anecdotes related to perceptions of DBE certification as valuable can be found in Section III.A.2.

DBE interviewees reported a variety of obstacles to pursuing work in the public sector, including contract size, payment delays, bonding/insurance issues, prevailing wage requirements, and bureaucracy. CATA #11, a minority trade association, believes its members are less successful in the public sector due to the rules and regulations, including certified payroll and bonding and insurance requirements. Interviewee #20, an Armenian male-owned firm, does very little public sector work and has not done any work for Caltrans. He was burned on a contract with a local school system where he did $20,000.00 of extra work, but was not paid for it because he failed to file the proper change order. Interviewee #20's main issues working in public works are: (1) "so much paperwork," which is "driving us nuts"; and (2) the delay in payment. Interviewee #73, a white male-owned firm, stated that the turn-around time for payment in the public sector is worse than the private sector. In addition, there is a lot of "red tape" in the public sector and the administrative time involved for any one project is four times longer than in the private sector. Furthermore, companies are required to bond their work in the public sector, which Interviewee #20 does not like to do. For these reasons, he avoids public work.

Interviewee #24, a white female-owned firm, has not been successful in the public sector. She believes it is because she will not play "political games." She refuses to "smooze." She sees the good ole boys club as an obstacle to receiving work.

One sub-contractor stated that general contractors "go out of their ways to hurt a small contracting firm. We have instances where the special spec's had to be re-written because of the abuse of the general contractor." (Written testimony submitted 3/12/07).

A certified WBE / DBE specializing in railway, rapid transit, and light rail signal system design stated: "I have been contacted by all kinds of construction type firms for [unrelated projects] but not one project that is even remotely close to [her area of expertise]." She has had great success in Illinois and Oregon but not in California. (Written testimony submitted 3/15/07).

More anecdotes regarding perceived barriers in the public and private sectors and for working with Caltrans can be found in Sections III.E and III.I.

Some interviewees reported greater success in the public sector for various reasons. Interviewee #3, an Asian American male-owned firm, feels that the public sector demands more professionalism than the private sector since there are a lot of professionals bidding, but noted some issues with delay of payment and inspection requirements with respect to public sector work. The company does the same type of work in both sectors, but indicated that the size and the price of its private sector jobs are generally less than those of the jobs it does in the public sector and for Caltrans. Interviewee #11, a Native American male-owned firm, is more comfortable with the "structure" of the bidding process in the public sector than the "relationship" basis for private projects. For this reason, it does not engage in much private sector work. The company's private sector work is usually on large projects of mostly over $100 million in value. The company's public sector work ranges from about $50-$70 million in value for prime contracts, and when the company has acted as subconsultants the projects are usually in the billions. Interviewee #39, a Hispanic male-owned firm, works almost exclusively in the public sector due to the nature of its work – "[v]ery few people are building their own bridge."

CATA #12, an African American trade association, said that working in the private sector is often difficult, and that though working in the public sector is easier than working in the private sector, the public sector could be easier if conflicting laws and regulations did not make things harder and

confuse buyers. According to CATA #12, "It's a challenge any way you go . . . ." But, he said, Caltrans is a lot better than other government entities and is "one of the ones trying to do it as fairly as possible." Asked about whether any DBEs were working as prime contractors for Caltrans, CATA #12 responded that "not that many . . . get opportunities from a contractual standpoint . . . ." He added that "[r]ace-neutral doesn't even open the door for opportunity." He also said that Caltrans is at least trying (whereas others are not), and with the right opportunities, Caltrans can set a good example. He further added that if it were not for Caltrans, some of the companies with whom he works would not get any business at all, and that others would not do as well as they do now.

Some firms reported that public sector work is less profitable than private sector jobs. Interviewee #19, a Hispanic male-owned firm, stated that in Caltrans and public work, there are a lot less profit than in private work. One reason for this is the prevailing wage requirements, which according to Interviewee #19 sometimes increase in the middle of a contract. Caltrans will not allow a price increase to offset the wage increase, even if it can be proven. On a job in District 6, #19 Interviewees company has not been given any credit for the wage increases since 2004, even though they've shown Caltrans the certified payroll.

Some interviewees stated that projects are generally larger or more profitable in the public sector. Interviewee #35, a white female-owned firm, considers itself successful in the public sector and attributes its success in part to the fact that contracts are generally larger in the public sector. CATA #7, a Filipino trade association, believes contracts in the public sector are larger due to the nature of the work. Interviewees #14 and #41 (both white male-owned businesses) state that public sector work is larger. CATA #3, a Hispanic trade association, reported that government work can be more lucrative than private sector work, but the former requires a "lot more effort."

Interviewee #40, white male-owned firm, stated that due to the open bid system its ability to get public sector work depends if it can cut its price low enough. He reported that public sector work is more "cut and dry" than the private sector – especially with regard to payment.

Some interviewees reported payment issues in the public sector. Interviewee #44, a Middle Eastern male-owned firm, stated that his only complaint about working in the public sector is the turn over time for payments. It causes a cash flow problem for his business. Interviewee #85, a white male-owned firm, reports that sometimes the pay is slow when Caltrans is involved, but the good thing there is that you always know you will get paid in the end. Similarly, Interviewee #74, a white male-owned firm, prefers working in the public sector because the payment is "guaranteed," unlike the private sector where contractors or clients sometimes do not pay at all.

More anecdotes regarding payment in the public and private sectors and on Caltrans projects can be found in Section III.F.

Some interviewees reported difficultly obtaining work in the public sector due to the good ole' boy network. Interviewee #57, an Asian American male-owned firm, said that the primes only pick and choose from a few select DBEs and it is very difficult to convince primes to change their DBE partners. Interviewee #59, an African American male-owned firm, has faced lots of difficulty in the public sector obtaining work because of the company's size and due to the fact that there is an "old boy network" in place. He stated that prime contractors tend to want to use people that they are familiar with, and that makes it difficult for him. Interviewee #61, an Asian American male-owned firm, indicated that this is due to the fact that "there is a lot of competition out there" in the public

sector. “Most prime contractors do already have their own subs formed with them, as opposed to trying to start and trying to gather it.”

CATA #5, a trade association representing subcontractors, stated that a lot of prime contractors have “select bid lists.” The select bid lists are lists of subcontractors that the primes prefer to use. The primes use these select subcontractors because they know their work and they have “prequalified” them by checking their bonding capacity and financial stability. It is difficult for subcontractors to get on these select bid lists which occurs mostly through word of mouth.

A small consulting firm, (presumably a minority owned company), stated: "Most of the time it is not worth bidding A/E work as sub because the primes have their own staff [and] show you on the proposal but when they are awarded the job they don’t respond to the subs. It's almost better to be a prime if you are a minority based company." (Written testimony submitted 3/16/07).

More anecdotes regarding the good ole' boy network as a barrier to receiving work in the public and private sectors can be found in Section III.I.2.

Good faith efforts:

Many DBEs report that prime contractors sometimes do not actually engage in genuine “good faith efforts” to utilize DBEs. As stated by CATA #4, an Asian American trade association, prime contractors are supposed to advertise opportunities and actively solicit DBE subcontractors and subconsultants through faxes, telephone calls, and emails. CATA #4 said that sometimes primes just “go through the motions” instead of genuinely trying to find DBEs. CATA #4 feels that this could be prevented, at least in part, if "Caltrans analysts" were more experienced in evaluating “good faith.”

Interviewee #8, a Hispanic male-owned firm, stated that prime firms often falsify their good faith efforts to utilize DBE firms – "the people who are seeking out the DBEs generally could care less about a DBE." According to Interviewee #8, "the DBE program is a good program. But [he] I think[s] a lot of people bypass it just simply [by] doing their good faith effort and things of that nature and really don't take much interest in the DBEs themselves … the good faith effort is what it's all about, instead of actually using a DBE."

According to Interviewee #8, “basically all they do is meet their good faith efforts and never have any intentions of using us.” He estimated that his company winds up working on only about 25% of the Caltrans jobs for which it is contacted to submit a bid. For bids for which the company is solicited on work for other public entities, Interviewee #8 estimated that the percentage was even lower and stated that his company did not “get as many of” these jobs as they did the ones for Caltrans work. Further, noted Interviewee #8, the company is usually trying to meet a DVBE goal as opposed to a MBE or WBE goal, and that the amount of work that the company subcontracts out varies but typically is between anywhere from 5% to 25% of the total contract amount.

Interviewee #43, a Native American male-owned firm, stated "I think its probably the same as in all public sectors and that is I think there’s more of an interest to fulfill some sort of notification quota or requirement. But there’s much less incentive for companies to actually follow up and seriously consider bids from minority businesses. In other words, they’re much more interested in just making an initial contact so that they can record in their records that they did that, rather than actually being interested in receiving bids from minority contractors."

Interviewee #67, a white female-owned firm, had not heard of prime contractors falsifying their good faith efforts to utilize DBEs, but she questioned the sincerity of many firms when undertaking these efforts and whether they in fact are made in good faith. Similarly, Interviewee #75, a white male-owned business, had no personal knowledge of primes falsifying their good faith efforts, but he sometimes hears about it happening.

According to CATA #1, an Asian American trade association, prime contractors do not "falsify" their good faith efforts to use DBE firms, but they undertake these efforts in a rather "strategic manner" and use good faith efforts as a loophole to get around using DBEs. For example, said CATA #1, prime contractors will sometimes put out a request for solicitations and give firms only twenty-four hours to respond. He mentioned another instance (on a water project in San Diego in winter 2006) where his firm submitted a bid to a prime but never heard back. He said that two or three months later his firm got an email from the agency saying that the prime could not certify his firm as a DBE.

A female-owned DBE testified at a public hearing in Oakland that "the solicitations we get, they really don't want a phone call back. They pass the paper by you, and if you call and inquire, they really don't want to be bothered with you anyway." (P.H. Oakland, 3/27/07).

A small African American owned construction company testified at a public hearing in San Diego and stated "I think that a lot of prime contractors are disingenuous when it comes to really being forthright and really soliciting participation from these companies … you do have contractors that do make a good faith effort … I know with Caltrans, San Diego, they have this annual event where they recognize contractors that have done an exceptional job, so there are those that do. But my feeling is that probably the vast majority of large prime contractors do not make a good faith effort." He noted that there are "a ton of resources" designed to help prime contractors locate qualified DBEs. He listed Caltrans website, "lots of associations, the Black Contractor Association, the National Multi-Cultural Association, women in construction associations." Prime contractors should utilize these sources as part of their good faith. "Why as a small business can I do it and a lot of the large primes contractors seem not to be able to?" (P.H. San Diego, 3/22/07).

A DBE consulting firm testified at a public hearing in San Diego, "we used to call good faith efforts 'good fake efforts' because all you have to do is program the numbers into the fax machine, hit, you know, fax blast." He recalls a project at the Oakland Airport where the prime had an "incentivized contract to include small and local businesses." The way the contract was structured if the prime did not use these businesses it was penalized, the more it used the more it earned. "They hired local consultants; they went out and talked to the people, because the last thing they wanted was to lose money." A representative from a minority trade association, who testified at a public hearing in Sacramento agreed – "I believe that there needs to be some specific compliance, or if you will, chief or incentive penalties or financial incentives to get them engaged in the process of working with small business contractors." (P.H. San Diego, 3/22/07).

A Hispanic female-owned consulting firm testified at a public hearing in Los Angeles that "lack of consistent and proper review of good faith efforts, pre and post-award" is a barrier. "While many agencies have instituted a proactive review of good faith efforts, some agencies only review the good faith effort requirements if there is a complaint filed." (P.H. Los Angeles, 4/4/07).

A small minority business enterprise doing building infrastructure, submitted written testimony that, "most of the calls we get are associated with the 'good faith' clauses that many of the public works

contracts contain. Everything from painting to landscaping to what ever just to meet the 'good faith' requirements. We get most of those calls because our company's name starts with an A and most list[s] are in alphabetical order." (Written testimony submitted 4/4/07).

A DBE and 8A company submitting written testimony stated they have received hundreds of phone calls regarding an invitation to bid over the past few years within one to two days of a bid deadline, which has made it impossible to bid. (Written testimony submitted 3/26/07).

A small (presumably DBE) business, submitting written testimony, stated she has a lot of general contractors calling her wanting bids, sometimes even blind bids, but she does not see any contracts out of it, even when she is "asking for numbers to be within their budget." "There was a general contractor that called and told me he needed a bid because he was just required to get one for the DBE program." (Written testimony submitted 3/26/07).

A wireless and wired systems provider (presumably a DBE) stated, "We receive many requests from prime contractors that require paving, striping, fencing, etc. I have never received any requests that pertain to [my industry of] communications." (Written testimony submitted 3/13/07).

A SBE and DVBE landscape contractor, submitted written testimony that "Recently, we received a voicemail at the office from a company with whom we have never had any previous contact or correspondence, saying 'This is XYZ Company calling, and this is our Good Faith call. We have recorded it.' Nothing more." The company did not reference the job, the bid date, or leave a call back number. "Most other DVBEs I discuss this with bemoan the lack of enforcement of the good faith system and 3% goals. Most refer to it as the, 'Good Faith Blow-Off" system.' (Written testimony submitted 3/15/07).

A certified small business and DVBE, submitting written testimony, stated: business owners are treated unfairly based on their race, ethnicity or gender, "because unregulated bias within the system and the superficiality of the [Good Faith Efforts]." (Written testimony submitted 3/15/07).

A certified DBE, submitting written testimony, stated that when the race-conscious goals were in effect, "many prime consultants/contractors considered good-faith outreach requirements and DBE participation goals as a 'burden and a nuisance' and devised creative ways to circumvent those requirements." (Written testimony submitted 4/12/07).

A Native American DBE, submitting written testimony, stated good faith efforts forces contractors to "include diverse bidding, be accurate in their paperwork, and, occasionally, I know that an outside contractor who is not part of the local network will get an opportunity." (Written testimony submitted 3/20/07).

Some firms felt that prime contractors were not complying with good faith efforts because they were never contacted. Interviewee #2, an African American male-owned firm, felt that the very fact that he was never contacted by prime contractors suggested that good faith efforts were not effective in identifying DBE's for Caltrans work.

A woman-owned DBE, stated: "we are in the Blue Book [and the Fresno Builder's Exchange] and regularly receive bids opp[ortunities] for projects but we have *NEVER: received a bid opp[ortunity] from a prime for work on a Caltrans project." (Written testimony submitted 3/14/07).

A representative from the Small Business Commission stated, at a public hearing in San Jose, that "there's not really much teeth behind good faith efforts." His members are frustrated and feel, "[w]hy go through all the hoops, and at the end of the day I'm not getting any work." (P.H. San Jose, 4/4/07).

Some DBEs believed prime contractors were falsifying their good faith efforts because they were contacted for work outside their specialty or at the last minute. A minority female-owned business testified at a public hearing in San Bernardino that the company has been solicited from prime contractors "very little" since receiving certification. "I think the two letters that I've received from prime contractors looking for a disadvantaged business have been something that I don't do. It has nothing to do with me at all. They sent me a letter. So I can't understand … why they would send me something for construction workers … to me for a security guard?" (P. H. San Bernardino, 3/20/07).

Interviewee #21, a Hispanic male-owned firm, is not directly aware of any falsification of good faith efforts, but they can imagine it happens given their experiences of being called by companies that obviously did not have any interest in the company's work. A female-owned DBE firm testified at the Eureka public hearing that "whenever I'm called, I'm called usually the day before and it's from someone in LA. They know I don't have the bid packet. I can't bid it. So a lot of times it is just doing a good faith. So I'm not really given the opportunity to bid." (P.H. Eureka, 3/20/07)

One DBE stated that primes comply with good faith efforts. Interviewee #4, a Native American male-owned firm, stated that he did surveying work for Caltrans, and that he had good experiences with prime contractors making genuine good faith efforts to utilize DBEs. Interviewee #34, a white male-owned firm, stated that he was not aware of any prime contractors falsifying their good faith efforts and that going through the good faith efforts requirement is "a pretty standard way of doing business here locally", and "kind of an accepted part of the way things operate."

Some non-DBEs expressed frustration over good faith efforts because DBEs are difficult to find and the process is costly. Interviewee #56, a white male-owned firm, stated that he is not aware of false DBE reporting. He stated that contractors usually report "good faith efforts" in good faith but believes these efforts are unnecessary. Interviewee #76, a white male-owned firm, is not personally aware of people falsifying their DBE utilization, but he stated he was sure it does happen. According to Interviewee #76, some of the good faith effort requirements are almost impossible to comply with, so falsifying one's efforts is almost a necessity. CATA #2, an African American trade association, stated that most prime contractors now have staff and/or departments that handle their good faith efforts compliance.

Non-DBE general contractors say they struggle with whether to submit a lower bid with a good-faith effort or a higher bid that meets the goals. A large general contractor at the Eureka public hearing stated "when bid opening comes along … they look at the low bidder first. And he is the one who says 'I have a good-faith effort, I've contacted these DBEs, and they cost too much, so I decided not to use them.' But if you go and look at the second low bidder, the second low bidder … could have been the guy who said, 'Well, I know it was a little more to hire that DBE, but I did it anyway, and I'm risking not getting that low bid.'" (P.H. Eureka, 3/23/07). When Interviewee #18, a Native American male-owned business, is soliciting price quotes from other DBEs, he has a problem if he is trying to meet a goal because there may be little, if any, work to subcontractor out.

Some noted that DBE availability was an issue. CATA #6, a trade association representing heavy engineering contractors, stated that DBE availability is an issue with prime contractors. Often times there are simply no DBE firms available to perform the work in a particular geographic area or a particular industry niche. When the goals were in place, prime contractors spent huge amounts of money establishing "good faith efforts" even when everyone acknowledged the goal was impossible. Good faith efforts are not a requirement anymore so prime contractors do not do it. Contractors have to advertise in various industry publications, they have to make phone calls, send faxes, and have to show proof that they made these calls and faxes. It is very time intensive. There is a member in the association whose entire responsibility was to do these good faith efforts for the contractors. Otherwise, contractors have to have someone on staff and it is very expensive.

Interviewee #9, a white male-owned business, stated that it is "hard to give away that much work" on City contracts where the DBE goal is 25%, and that sometimes the company is not awarded a contract because they did not meet the DBE goal on a previous project. The interviewee stated also that when working for the City of Los Angeles, his division spends more time tracking the accounting and making sure that DBE goals are satisfied than it does actually doing the work. Interviewee #9 spoke specifically of a current contract where 20-30% of the cost is going to administration, and he called it "a waste."

Interviewee #14, a white male-owned business, stated that Company often has problems finding enough DBE's to meet program requirements on contracts. Often, they end up "having to play a lot of games" in order to satisfy the DBE requirements and create a team to get a project done. The Interviewees both felt that the DBE program was not necessarily the best way to build highways or the best value for tax-payer money.

Interviewee #26, a white male-owned business, stated that his company has never had any problems satisfying a DVBE goal on a project but that it was "hard' for them to meet the MBE and WBE goals on Caltrans projects, especially in more rural areas where there are fewer minorities. Specifically, Interviewee #26 noted hat it is harder to meet DBE goals in Humboldt County and Del Norte County than it is in the Bay Area.

Interviewee #46, an Asian American male-owned business, stated that it sometimes is hard to meet DBE goals because it is difficult to find DBE firms in one's area that do certain specialty work. According to Interviewee #46, many firms are unable and/or unwilling to travel a long distance just to work as a subcontractor on a project because "[l]ogistically, it's a nightmare."

Interviewee #42, and African American male-owned business felt he was able to locate MBEs and DBEs through people in the business. He stated “there’s not a whole lot of African American contractors [in Bakersfield] so we all know each other.” He stated there are also a lot of Hispanic and white contractors.

Interviewee #40, a white male-owned business, noted that sometimes it’s difficult for his company to meet DBE goals because they can only use contractors that are certified by the union; there are few DBE union contractors. Elimination of DBE requirements has made it much easier for Interviewee 40’s company to enter into subcontracts. Interviewee #40 does not have any experience with DBE utilization in the private sector – “They don’t follow the same rules that public sector does.”

But, Interviewee #17, a white male-owned business, stated also that many DBE firms are "very limited" in how much they can help (because of their size), and that "it's also difficult to get the percentages of time that they need to satisfy the State requirements" – i.e., that "getting them [the DBE subcontractors] enough time" can be "difficult at times."

Interviewee #74, a white male-owned firm, uses minority subcontractors but states they are becoming "harder and harder to find." He uses the book of DBEs maintained by the State. He stated that the City of San Francisco's goal of 50% minority participation is "outrageous." He believes Caltrans 10% goals is more reasonable. He further stated that San Francisco is very stringent when it comes to replacing DBE subcontractors, but Caltrans is "more flexible."

Other firms felt it was not difficult to find DBE. Interviewee #61, an Asian American male-owned business noted it is easy to find DBEs and it is easy to meet the DBE goals. Interviewee #10, an African American male-owned business, stated that when he uses the Caltrans DBE list, that he has had no problems finding qualified DBEs or meeting DBE goals, and that his experiences utilizing and working with DBEs had been favorable. Interviewee #49, an African American male-owned business, said that he never had any problems finding DBEs or meeting project DBE goals.

Interviewee #51, a Hispanic male-owned business, said that he never encountered a DBE goal in the private sector; that, even though it was hard to find DBE firms to perform certain specialty work (he gave the example of electric welding and said that if there are DBE firms that do this work, they are probably so busy that you cannot get them to work on your contract), the company never had any problems meeting DBE goals; and that the company usually tries to subcontract out upwards of 40% of the work on a job. He also said that the easiest way to deal with the percentage issue is to lay out in the specifications a certain percentage of the work that must be subcontracted out.

Interviewee #59, and African American male-owned business, is able to meet DBE goals, and stated that it is easy to find DBEs.

Some felt Caltrans needed to do a better job enforcing good faith efforts. According to CATA #2, an Asian American trade association, Caltrans' "biggest problem" is that it accepts too much good faith, which, he said, is the basis upon which upwards of 85% of Caltrans contracts are awarded. He said that no one polices prime contractors' good faith efforts and that Caltrans needs to be more proactive in challenging their good faith efforts. CATA #2 stated that the Association had addressed this issue with Caltrans "all the time" and that Caltrans' response was that it was doing all it could but lacked adequate resources. He also stated that nowadays, since the Caltrans DBE program has been suspended, prime contractors do not even use good faith efforts but instead just award contracts based on the lowest bid. He said that before primes at least gave the appearance of trying, and that "if [the DBE program] wasn't working under [a] race-conscious system, you know it's not working under [a] race-neutral [one]."

CATA #12, an African American trade association, said that he had an "array of stories" from members about their not being able to get work from Caltrans, including when they were put on the bid list but did not wind up getting any work. He said that there needs to be in place a monitoring process for Caltrans contracts to make sure that businesses listed on the bid are actually getting the work (and that Caltrans needs to penalize prime contractors who are not using those listed on their bid).

One interviewee believes Caltrans does an adequate job checking for good faith. Interviewee #27, an African American male-owned firm, stated "usually when we get those types of people they're like from L.A. [Los Angeles] or Bakersfield or out of our region. And they just call to get the good faith. People around here . . . contractors we work with . . . they don't do that." Interviewee #27 stated that it was a common experience for Caltrans to call and ask if prime contractors had actually contacted them. Interviewee #40, a white male-owned firm, stated he does not have a lot of experience with contractors falsifying "good faith efforts," especially since you have to show records and confirmation proof.

Some DBEs stated that there is "no way of knowing" whether a prime contractor is falsifying his or her good faith effort on a particular project. Interviewee #31, an African American female-owned firm, stated that when you do not get on a project team, there is no reason to pursue the matter further because no one is going to help you. According to Interviewee #31, it would be a waste of resources to do investigative work as to good faith efforts. Interviewee #49, an African American male-owned firm, stated that there is "really no way of knowing" whether prime contractors falsify their good faith efforts to utilize DBEs. Interviewee #51, a Hispanic male-owned firm, had no evidence but believes it happens on Caltrans projects and others. CATA #2, an African American trade association, said he had no proof that prime contractors were falsifying their good faith efforts to utilize DBEs, but that Caltrans was not verifying whether or not primes make these efforts and should do a better job of doing so.

Two interviewees knew of challenges to good faith efforts. Interviewee #57, an Asian American male-owned firm, knows of at least one prime contractor who lost a Caltrans project because of falsifying good faith efforts. Interviewee #26, a white male-owned firm, recalls that he once unsuccessfully protested the awarding of a contract by the City of Redding based on his competitor's failure to comply with the good faith effort and advertising requirements. Otherwise he "really [did]n't know" about prime contractors falsifying their good faith efforts to utilize DBEs.

Some DBE interviewees stated that DBEs are sometimes listed on the bid and then their work is cut or they are never used. CATA #3, a Hispanic trade association, stated that he did not know about any prime contractors falsifying their good faith efforts to utilize DBEs, but that sometimes contractors put DBE firms on a bid list just to play a minor role and thereby try to "minimize [the DBEs'] work," and that he had heard about situations (he mentioned one particular one out of state) where prime contractors just give subcontractors a check without actually doing any work. CATA #7, a Filipino trade association, believes this is prevalent. He has also seen situations where the prime wins the project and never calls the DBE whose quote he used in the bid. Interviewee #29, an African American male-owned firm, believes companies do not care whether the DBEs are real or not, just that they have satisfied the requirements. As for falsifications, Interviewee #29 stated that he has heard of a contractor taking the certifications obtained from his good faith efforts from a prior job and inserting them into future jobs without the knowledge of the DBE.

A small DBE information technology consulting firm who testified at the Los Angeles public hearing stated: "In our experience, what has happened is that we will be invited to formally bid on a project with a prime, and then once the prime has won the work … they then will call us and cut back on our hours, saying that they have budget constraints and therefore are not able to keep … what was initially proposed." She recalled an example: "I was on the District 59 contract that just ended. It was three years on call, and that team was successful. I was a subconsultant on that team. I never placed a single person, never got a dollar out of that contract." (P.H. Los Angeles, 3/29/07).

A female-owned DBE blueprinting company testifying at Los Angeles public hearing stated that "there are some situations where we were invited because of our WBE and SBE status. The really sad news is some of those – in a lot of cases, we haven't actually seen the work. They use your name and then you don't get the work. So it would be nice if there was some enforcement … some kind of monitoring system down the line a year later." This has happened to her five (5) times in the last year. (P.H. Los Angeles, 3/29/07).

Experience with DBEs in the public and private sector.

Solicitation of bids/price quotes from DBEs:

Several of the interviewees indicated they had frequent experience with soliciting bids and price quotes from DBEs in both the public and private sectors. Interviewee #10, an African American male-owned business, stated that prime contractors contact him requesting bid submissions on Caltrans projects "usually every time a bid comes out[,]" and that the company receives work from about one third of the bids that it submits. According to Interviewee #10, the same 33% figure applies to the company's receiving non-Caltrans public sector jobs for which it bids as a subcontractor contractor and for which prime contractors are looking to meet a DBE goal.

Interviewee #17, a white male-owned business, stated that his experiences soliciting bids from DBEs on Caltrans projects have been positive. As for the private sector, he stated that his firm's experiences with soliciting bids from DBEs was "fine." Interviewee #26, a white male-owned business, characterized his experiences soliciting bids from and utilizing DBEs on private sector jobs as being "[i]n general . . . pretty good."

According to Interviewee #27, an African American male-owned business, the company receives solicitations from prime contractors asking for bids on Caltrans work "almost weekly" and/or whenever Caltrans publishes its jobs. Interviewee #54, a Hispanic male-owned business, said that he "very often" is contacted by primes for concrete work in the private sector (for road improvement, parking lot improvement, slab, and formation work), and that he winds up getting about 70% of the jobs that he bids.

Interviewee #51, a Hispanic male-owned business, said that the company gets contacted much more frequently by prime contractors to work on other public sector jobs than it does for Caltrans jobs, and that the company had bid on four or five Caltrans jobs in the last three years but had not received any of them because it was not the low bidder. Interviewee #51 also stated that whether or not his or any other firm is chosen depends on whether they submit the low bid, noting that primes "want to be the low bidder in the process so they can get the job, and they are sure not going to use you if you are double their estimate or 20% or 10% or 1% higher, in some cases, than the non-DBE guys."

Interviewee #33, a Hispanic female-owned business, stated that the firm's receiving requests to bid as a subcontractor on Caltrans projects "goes in cycles" and that "right now it's happening more often[,]" as they had received three requests in the last two months. She stated that the requests have "been pretty constant [over] the past year."

Interviewee #9, a white male-owned business, noted that his division has experience soliciting bids from and utilizing DBEs on projects for other public agencies, including the City of Los Angeles. Interviewee #26, a white male-owned business, also relayed experiences with soliciting bids from and

utilizing DBEs on projects for the County of Sacramento, which he said were the only non-Caltrans public sector projects that he had worked on in the past seven years.

Interviewee #61, an Asian American male-owned business, stated that company has not had any difficulties with prime contractors requesting submissions of bids on non-Caltrans public work. Interviewee #67, a white female-owned business, noted that she had recently received a letter from a prime contractor saying that her company had been selected as part of a team for an upcoming Metropolitan Water District wastewater project for which bids are still out, and that this is the first time the company had ever heard back from a prime contractor to which it submitted a subcontracting bid.

Interviewee #13, a Pakistani male-owned business, indicated that his firm is contacted about as frequently by primes requesting price quotes on non-Caltrans public sector projects as it is contacted for quotes on Caltrans projects. However, Interviewee #13 stated that he has "more success" in getting work from these agencies, which are mainly water districts and cities, and that his experiences seeking and getting work from these agencies were more positive than those he had with Caltrans. Interviewee #13 also stated that "that work [for agencies other than Caltrans] is based on [the] qualifications and reputation of my company. It has nothing to do with me being DBE certified."

According to Interviewee #49, an African American male-owned business, it has been "a couple of years" since the company last bid as a subcontractor on a public sector job, but the company used to get contacted "frequently" by prime contractors to bid on Caltrans and other public sector jobs. Interviewee #33, a Hispanic female-owned business, felt that bidding as a subcontractor on non-Caltrans public sector work is "[g]enerally . . . an easier process[,]" depending on the city and/or agency, and she stated that the company receives a higher percentage of these jobs than it does the Caltrans ones.

Some of the interviewees expressed general experience soliciting bids and price quotes from DBEs. When asked about experiences with soliciting bids or price quotes from DBEs for private sector and non-Caltrans public sector work, Interviewee #31, an African American female-owned business, answered, "It's fine" and "No problems." Interviewee #31 stated that he and others at his company "are the ones that pursue getting all projects" and that prime contractors "do not normally come to [them] . . . ." Interviewee #31 attributed this lack of solicitations from prime contractors to Caltrans' lack of enforcement of DBE goals and/or requirements.

According to Interviewee #31, when the company does get solicitations from prime contractors for work – whether it be for Caltrans, other agencies, or in the private sector – the "majority of the time [it is because] either the teams figure that they have to have WMBEs on their team . . . or they know about us and know that we are that good." Interviewee #31 also stated that the company experienced a decrease in solicitations to work on public sector projects after the passage of Proposition 209 in 1996. Interviewee #31 noted that the company saw this decline "in most city and county governments [and] public transportation agencies."

Interviewee #48, an Asian American male-owned firm, stated also that the frequency with which his company is contacted by prime contractors to bid on non-Caltrans public sector projects varies, and that, when it bids on these projects, the company winds up getting more than half of the jobs. Interviewee #32, an Asian American female-owned business, recounted a similar experience, and

noted that, in general, her experiences soliciting bids from and utilizing DBEs for private sector and non-Caltrans public sector work were positive ones.

However, Interviewee #46, an Asian American male-owned business, thought that "a lot of times" it was "ambiguous" exactly what was required of firms in terms of "put[ting] the DBE requirements together for a bid … and the paperwork [for doing so]." He relayed one experience where his company lost a job because they were told that their "DBE wasn't correct."

Interviewee #49, an African American male-owned business, noted that his experiences soliciting bids from and utilizing DBEs on Caltrans projects and other public sector jobs had been the "just the same" as his experiences soliciting bids from and utilizing non-DBE firms. Interviewee #54, a Hispanic male-owned business, indicated the same; he uses subcontractors, some of whom are DBE firms, in the private sector and on non-Caltrans public sector work, and that his experiences with DBEs were no different than non-DBE firms.

Interviewee #58, a white female-owned business, stated that the company generally goes to firms that other people have recommended and have had success. With a couple of exceptions, every firm they have asked for a quote from has delivered. Sometimes companies are too busy, and they have a reduced capacity to respond. Interviewee #42, an African American male-owned business, stated that he has submitted bids and never hears back from the prime contractor. He stated that he has tried to obtain feedback and has heard from the contractor that the bid is not finished yet. Interviewee #42 felt that if you do not get the bid its because "you're price is too high . . . that would be the main thing."

Some of the interviewees specifically recounted their experiences with solicitations pertaining only to Caltrans work. Interviewee #61, an Asian American male-owned business, stated that soliciting bids/price quotes from DBEs on Caltrans projects is fairly easy. Interviewee #35, a white female-owned business, reported that primes request they submit a bid on a Caltrans project roughly two to three times per year. They usually receive these jobs. They receive requests for bids on public sector non-Caltrans projects more often than for Caltrans projects. Interviewee #18, a Native American male-owned business, reported his experience with a prime contractor requesting submission of a bid or price quote on a Caltrans project has been sometimes good and other times difficult. For example, he said the prime contractor might have their own concrete crews and they are just doing their good faith effort.

When Interviewee #18, a Native American male-owned firm, is soliciting price quotes from other DBEs, he has a problem if he is trying to meet a goal because there may be little, if any, work to subcontract out. Interviewee #33, a Hispanic female-owned business, noted the same problem, indicating that of the Caltrans jobs the company bids as subcontractor, it winds up working on less than half of them, but she noted that some of this is because "they [the primes] don't have the work either."

Interviewee #46, an Asian American male-owned business, relayed experiences where his firm had been solicited to bid on projects that were outside of its geographical area and indicated that this was most often the case with respect to Caltrans work. Interviewee #48, an Asian American male-owned firm, noted only one experience with a prime contractor requesting his company to bid on a Caltrans project.

Interviewee #56, a white male-owned business, has experience soliciting bids and price quotes from DBEs in his work with Caltrans. Specifically, he "might affiliate [him]self with another traffic control company that's going to do another portion of the – a bigger portion of the work and have them just – [he]'d subcontract to them and run under their DBE so . . . . there's more participation involved."

Interviewee #57, an Asian American male-owned business, notes that sometimes he receives faxes from primes before bids open that are very far from the company's business and/or its requirements. The faxes that are received by primes for submissions on Caltrans projects have not been for projects where he could actually be used. He thinks that these are merely so that primes can show they made a "good faith effort," but not because they are actually interested in using his company. Interviewee #57 notes this happened frequently in 2004 and 2005, but then he requested to be removed from these facsimile listings.

Interviewee #59, an African American male-owned business, also received similar solicitations, and stated that although primes used to request submissions of bids and price quotes on Caltrans projects often, Interviewee #59 does not receive many of these requests anymore, except from contractors with which the company has worked in the past. Interviewee #59 has never been a prime on a Caltrans project, so he's generally functioning as a subcontractor due to the size of the projects. Interviewee #43, a Native American male-owned business, has had no experiences with a prime contractor requesting submission of a bid or price quote on a Caltrans project.

Interviewee #32, an Asian American female-owned business, indicated negative experience. She stated that the company gets called "maybe two or three times a year" to bid as a subcontractor on Caltrans work, but she described these experiences in the following manner: "They ask you to submit your qualifications and we do and then that's the end of that." Interviewee #32 said that they never know if a prime selected them, if the prime submitted their bid, or if the prime got the contract because "they don't get back to you to close the loop."

Interviewee #7, a white female-owned business, stated that the company does not solicit price quotes from subcontractors on Caltrans projects, but instead "just look[s] at their qualifications." Similarly, Interviewee #57, a Native American male-owned business, has very minimal experience soliciting bids or price quotes with regard to Caltrans projects, and he said that he does not pursue those opportunities anymore because he was not successful.

CATA #3, a Hispanic trade association, stated prime contractors do not request price quotes from the Association's members for private sector work. Primes requesting price quotes from his members for Caltrans work was something that he "ha[d]n't seen that much" and that he did not see any change in this regard in the past year because, as he put it, work with Caltrans it was "nil before, and it's nil now."

CATA #9, an association of consulting, engineering, and land surveying firms, told the interviewer that most of his members do work in a subcontractor capacity on Caltrans work. He stated his members would not have experience utilizing a DBE on a Caltrans project. He stated that in the private sector, his members do not look specifically to use a DBE but rather look for a subcontractor based on cost.

Some of the interviewees specifically noted solicitation experiences specifically with regard to private sector work. Some interviewees indicated positive experiences with solicitation for private sector work. CATA #11, a minority trade association, noted that his association gets eight to ten faxes and e-mails a day from private sector firms asking them for quotes from their members. Primes "are always looking for subcontractors." His members have received these jobs. His association gets faxes from primes on City or County projects in connection with good faith efforts. His members have received these jobs.

Interviewee #10, an African American male-owned business, stated that primes request bids on private sector work (sometimes because they are trying to meet a DBE goal). He points out, however, although his company lands about a one third of the work for which it bid as a subcontractor in the private sector, he is contacted less frequently by primes requesting bids for private sector work.

Interviewee #59, an African American male-owned business, stated that the solicitation of bids and price quotes from DBEs in the private sector has been positive. Interviewee #35, a female-owned business, stated that her company receives requests for bids on private sector projects about once a week. Interviewee #61, an Asian American male-owned business, reports experiences with prime contractors requesting submissions of bids/price quotes for private sector projects in the $1,000.00 to $6,000.00 range.

Interviewee #27, an African American male-owned business, stated that his company receives solicitations to bid on private sector work less often that it does to bid on public sector work. The white female-owner of Interviewee #27 attributed this difference to be at least in part due the company's being union and a lot of private contractors looking to use non-union workers. Interviewee #48, an Asian American male-owned firm, stated that his company "sometimes" received requests from prime contractors to bid on private sector projects, that these projects were less than 10% of the company's overall work, that there were no DBE goals for these projects, and that the company winds up getting over half of these jobs. Interviewee #46, an Asian American male-owned business, felt that his company's success in landing Caltrans and other public sector work "runs in streaks," as sometimes months pass without getting a job, whereas other times "you'll get a couple in a row."

Interviewee #13, a Pakistani male-owned business, felt that the only reason he was solicited for work in the private sector was because of his qualifications. Interviewee #13 stated that he also gets contacted by primes requesting bids on private sector work with the same frequency as it receives requests for bids on public sector work. He indicated that firms doing work in the private sector "could care less" whether or not they are soliciting a bid from or utilizing a DBE firm on a project.

Interviewee #32, an Asian American female-owned firm, stated that she does not get solicited to bid as a subcontractor on private sector work. Interviewee #43, a Native American male-owned business, has had experiences with prime contractors requesting submission of a bid or price quote on private sector contracts.

Interviewee #29, a Hispanic male-owned business, stated that his company's private work comes from relationships and reputation built over the many years that the company has been in business. Interviewee #29 stated that its company's DBE status had a lot to do with obtaining subcontractor work in the public sector but not at all in the private sector.

Some of the interviewees indicated they had very limited or no experience soliciting bids and price quotes from DBEs (Interviewee #1, #7, #19, #32, #48, #52, #54, #57, #60, #65, and #68). Interviewee #1, a Native American male-owned business, stated that he does not have experience soliciting bids or price quotes from DBEs on Caltrans projects. Interviewee #19, a Hispanic male-owned business, noted that because the company provides professional services, it is not typically engaged in the bidding process, and so has not had much experience with primes asking for bid submissions or price quotes on Caltrans projects. Interviewee #52 and Interviewee #65 (both white male-owned) and Interviewee #48, an Asian American male-owned business, also have no experience soliciting bids from or utilizing a DBE on Caltrans projects.

Interviewee #68, a white male-owned business, said that he did not really have any experience with soliciting bids from and/or utilizing DBE firms on Caltrans projects and that he "d[id]n't care" whether the firms he used as subcontractors were DBEs or not. Because, he said, no agency ever required that he use a DBE subcontractor.

Interviewee #48, an Asian American male-owned business, had no experience soliciting bids or price quotes from or utilizing DBEs on private sector projects or non-Caltrans public sector projects either. Interviewee #54, a Hispanic male-owned business noted that he had never been contacted to work as a subcontractor on any public sector job. Interviewee #65 also has no experience soliciting bids or price quotes on private sector projects. Interviewee #82, a white male-owned business, noted that he did not actively solicit DBEs because as soon as he was awarded a contract he already knew who he was going to use.

Some of the interviewees indicated frustration with the DBE solicitation process. Interviewee #5 a white female-owned business, spends between $500.00 to $1,000.00 soliciting for each project without usually securing any DBEs. Interviewee #5 stated further he felt that his company generally spent a lot of time soliciting, but that it received few responses. According to Interviewee #5, fewer than 10% of the businesses on the Caltrans list were responsive.

Interviewee #26, a white male-owned business, felt frustrated about the solicitation process, noting the amount of time involved in qualifying a bid, namely due to the requirement of showing good faith efforts to solicit bids from and utilize DBE firms—"too time consuming for a small contractor."

Interviewee #13, a Pakistani male-owned business, said that he responds to requests to bid on Caltrans projects, but that his firm gets "two typical responses": the prime either does not respond at all, or the prime responds saying that the team has already been formed but thanking his firm for expressing interest. Interviewee #13 described this process as "frustrating" and wondered why his firm spent so much money and resources to get DBE certification without receiving any benefit. Interviewee #13 stated that he instead could have utilized his staff "for making some money for the company. . . . If that effort would have been made somewhere else I would have got more jobs, more projects, more money."

Interviewee #58, a white female-owned business, recently submitted a proposal for Caltrans work that was for different environmental consulting services. Previously, the firm could submit for many different projects, but since the contracting structure has changed, it is become more difficult to obtain work.

Interviewee #30, an Asian American male-owned firm, explained that the same DBEs get all the work and there is a disparity between the "haves and have nots." He observed that probably 20% of the DBEs "gobble up" 80% of the work because of their standing relationships. The remaining 80% of the DBEs are fighting for 20% of the work.

Experience utilizing DBEs.

Caltrans

Some interviewees reported general and/or positive experiences with DBEs on Caltrans projects. Interviewee #9, a white male-owned business, stated that the company subcontracts out landscaping, geotechnical, and public relations work to DBE firms on Caltrans projects. He stated that there are a "couple of DBE landscape firms that are very very good" which the company continues to use, but he felt that these companies were "too big" and "too strong" to still be qualified as start-up firms. The interviewee further relayed also that he was "very pleased" with the geotechnical and landscaping DBE firms the company had used, but he felt that they were "hardly disadvantaged businesses," and that these firms commanded higher fees than they otherwise would be able to charge (i.e., the company could get a non-DBE firm to do the same work at a lower cost).

Interviewee #7, a white female-owned business, noted that the company does look for and utilize DBEs on Caltrans projects. Interviewee #7 characterized the experiences working with DBEs as positive ones, and said that they do not have any trouble locating these firms. Interviewee #7 stated these DBE firms are small businesses and that she likes to work with smaller companies because they are more responsive.

Interviewee #34, a white male-owned business, stated that the company had no problems in soliciting bids from and/or finding DBEs and that they "certainly don't have trouble finding the DBE firms that [they] regularly interact with." He stated also that the company "would certainly be open to becoming acquainted with and potentially using additional DBE firms if . . . [they] knew where to find them."

Interviewee #56, a white male-owned business, noted that he utilizes or works with DBEs on Caltrans projects four or five times in a year. Interviewee #56 stated that it is easy to engage with DBEs because "they're just well known through the business – it's easy." Generally, Interviewee #61, an Asian American male-owned business, stated that the company's projects for Caltrans range from $50,000 to $100,000, and it works as a civil engineer and construction manager – the experience has been generally positive.

Interviewee #81, a Hispanic male-owned business, does try to make a special point of hiring DBEs, but he is also looking for quality of work. His experiences working with DBEs has been very positive.

Some interviewees reported less positive experiences with DBEs on Caltrans projects. Interviewee #5, a white female-owned business, relayed a 2005 incident where a DBE with whom the company subcontracted had trouble performing on time. This scenario was problematic because Caltrans does not give prime contractors extra time on their contracts in order to help in these situations, and to enable prime contractors to help DBEs in these situations. She also stated that when the company was DBE-certified with Caltrans, it had trouble getting work from prime contractors because the company is a non-union enterprise.

Interviewee #9, a white male-owned business, identified one bad experience using a WBE subcontractor on a project several years ago. He stated that he was "very disappointed" in the quality of work provided, and that his company had to do the work over, yet still paid the WBE subcontractor for her work. Interviewee #9 said that his company had bad experiences with one or two DBE firms. Interviewee #9 also noted that his company no longer uses or does business with (or solicits bids from) these subcontractors because of these negative experiences, but that otherwise his company had never refused to work with a DBE.

The only problematic issue identified by Interviewee #34, a white male-owned business, with respect to his experiences with DBEs was that the company had to forecast up front the DBE participation on its projects, but sometimes had to make mid-stream corrections in terms of how subcontracts are directed. As a result, the firm had to "consciously monitor and at times make decisions about how the work gets allocated" in order to meet DBE goals throughout the course of a project, and to be able to show this on their intervals report that they have to prepare for Caltrans.

Interviewee #40, a white male-owned business, has used DBEs on Caltrans projects – some that were good, some that were bad. Interviewee #7, a white female-owned business, mentioned an experience where a prime contractor is awarded a job on a Caltrans contract for which it has more than one DBE on the team, but then only uses one of the DBE firms to do the work because that is all that is needed to satisfy the DBE goal. She gave the example of a consulting firm subcontracting out to a public relations firm the percentage of the overall work necessary to satisfy the DBE goal, but keeping the engineering and traffic work in-house (instead of subcontracting it out). She stated that they have had "numerous contracts with other primes that operate the same way." Interviewee #7 also noted experiences where prime contractors for whom they worked on Caltrans projects tried to "steal" their employees by hiring them directly.

A woman business owner, stated, "I think that serving as a subcontractor is no way in which to grow a firm. The primes take the vast majority of the budget and give a pittance to the subs." (Written testimony submitted 4/15/07).

A non-DBE, submitting written testimony stated: "We are very happy to see that the former mandatory sub-contracting requirements are gone, as we found that 'registered' minority and women-owned companies available were always radically more expensive and generally offered lower quality than the companies we routinely use. . . Given our experience with 'registered' DBE companies offering higher prices and lower quality, we avoid them. However, we certainly do use some which are not 'registered' as DBEs, even though the owners happen to be women or members of the specific races/ethnicities commonly listed as DBEs." (Written testimony submitted 3/16/07).

Non-Caltrans, Public Sector

Some interviewees recounted general and/or positive experiences with DBEs on non-Caltrans, public sector projects. Interviewee #5, a white female-owned business, noted that the company had better success using DBEs in its work for other public agencies, namely the California Public Utilities Commission ("CPUC"), and that the company helped eligible businesses to get certified by the CPUC and be "productive." Interviewee #17, a white male-owned business, also said that his experiences with utilizing a DBE on public sector projects had been "very positive," that his company has "good relationships" with the firms it uses, and that his firm "like[s] working with them."

Interviewee #32, an Asian American female-owned business, said the company had more success getting subcontractor work on non-Caltrans public sector jobs, but she did not know if these other agencies have DBE goals or not. She said that she got a contract with a municipality because she was a woman-owned small business, and that she had received several contracts for the Navy, who she said "has been successful in . . . awarding contracts to small businesses."

Interviewee #33, a Hispanic female-owned business, noted the company has used DBE subcontractors on public sector jobs for other agencies, and said that she has "had good success with all of them." She also stated that she "would not pick somebody just because they're MBE or WBE and not knowing that they're good at what they do."

Interviewee #11, a Native American male-owned business, has not had any experience using the same DBEs outside of the public sector, but the company has used the same DBEs outside of Caltrans, i.e., in other public projects. Interviewee #35, a white female-owned business, describes its experience working with DBEs as "fine."

Interviewee #3, an Asian American male-owned business, has been approached by large companies to work as a subcontractor, but for public sector work only.

In the non-Caltrans public project context, Interviewee #18, Native American male-owned business, observes that usually contractors will use companies that they have worked with for years who are already DBEs so the relationship is built up and hard to break into. Interviewee #18 has its own relationships with primes that will generally use him on their projects as long as the numbers quoted allow the prime a chance to be the low bid on the project. Interviewee #35, a white female-owned business, noted that it uses some female DBE subcontractors and one ethnic minority subcontractor who is not certified as a DBE in the public and private sector. Interviewee #35 has not specifically tried to use DBE subcontractors, rather some of the subcontractors they use just happen to be DBEs. They find their subcontractors "mostly through connections, who we know, based on word of mouth." Interviewee #35 has also used DBEs on a LADWP project with a DBE goal. The other projects did not have goals.

Interviewee #59, an African American male-owned business noted that the prime work that his company performs is in the public sector, and because he is a DBE himself, he is not actively looking for DBEs as subcontractors.

Private Sector

Some interviewees had experience with DBEs on private sector projects. With regard to using DBE subcontractors in the private sector, Interviewee #9, a white male-owned business, stated that the company does use DBE firms, but that these firms are selected because he feels that they are "the best for the job." Because the company's reputation is on the line, he does not want to be "required to use a set aside firm that [he] may or may not want to be using." Interviewee #17, a white male-owned business, stated also that he had good experiences utilizing DBEs in the private sector, and that using them in the private sector was "probably a little less restrictive" (because there are no percentage requirements or DBE goals).

Interviewee #34, a white male-owned business, could not recall an instance where he did not use a DBE in the private sector, and that the DBEs that he uses regularly would in any case be among the first choices for the work they do for him. He did say, however, that with respect to soliciting bids

from and utilizing DBEs in the private sector, "[i]t's just a different consideration" because "there's just not quite the same imperative when you're doing private sector work." Interviewee #20, an Armenian male-owned business, stated that in the private sector, DBE status is not an issue.

Interviewee #46, an Asian American male-owned business, said that private sector contracts "hardly ever ask you for a DBE requirement." Interviewee #65, a white male-owned business, has utilized or worked with a DBE in the private sector. According to Interviewee #11, Native American male-owned business, the company does not use DBEs when it is a prime in private contracts – the company pretty much handles everything in house.

CATA #1, an Asian American trade association, said that he had had good experiences soliciting bids from and working with other DBEs on Caltrans and other jobs. He said that, because of good networking, he had no problem finding DBEs, and he mentioned a current contract with a public agency (the Metropolitan Water District) where his firm is listed as the prime and three others as subcontractors. According to CATA #1, a "very very low percentage" of jobs that are bid are landed, and that getting private sector jobs depends heavily on whether a DBE program is looked upon as merely lip service or a real commitment. He identified one utility company that was good about hiring DBEs, but he said that most other utilities and defense contractors were not.

A certified female DBE firm, stated primes “will tell me outright they use DBEs when they are required to use them by the agency they are trying to win work from. After they win the work, they try to find a way to get rid of us or not give us any role.” (Written testimony submitted 3/8/07).

Non-Specific Industry Sector Comments

Some interviewees offered experiences with DBEs but did not specify whether the experience was in the public or private sector. Interviewee #8, a white male-owned business, indicated that his experiences using DBE subcontractors were no different (i.e., neither more negative nor more positive) than those using non-DBE firms and that "[i]t depends on the company" "[j]ust like anybody else" because there are good firms and there are bad firms. He also stated that when the company bids as a prime, which is usually on projects from between $200,000.00 to $2,000,000.00 they look for and use DBE subcontractors for striping work even though the DBE goal on these projects is generally satisfied by his company working on the job. Interviewee #20, an Armenian male-owned business, also noted that his experience with DBEs has not been any different than with non-DBEs.

Interviewee #4, a Native American male-owned business, noted that his company looks more to local subcontractors who have knowledge of local conditions and terrain on its jobs, but that the company does try to involve tribal members of the tribes on whose reservation the work is done as much as possible. Interviewee #4 also notes that the company usually does not engage in subcontracting relationships itself, but instead gives tribal governments a lists of contractors who it thinks would excel on any given job.

Interviewee #15, a white male-owned business, felt that there was no difference in average quality between DBE and non-DBE firms. His feeling was that the DBEs with whom he regularly worked were very well informed as to the requirements of the various RFPs and were often a real help in complying with them. He also mentioned that for particularly good firms, there was often some competition between the prime contractors responding to an RFP to get them. He stated that there are some DBEs with which he chose not to work, but put this into the broader context of variation in

quality of all subcontractor-contractors. That is, Interviewee #15 works with companies who provide excellent work product and chooses not to work with those that do not. DBEs as a whole provide the same level of work product as non-DBEs.

Interviewee #26, a white male-owned business, conveyed his feeling that DBEs often charge more or, in his words, "tack on money" because "minorities are much busier than your average, and I'm not racist, but I'll say white guy, because we [white men] don't have any preference." Interviewee #26 felt that at least one DBE firm that he had used as a subcontractor for traffic control work did not provide work of "as good a quality because they just had that kind of attitude that they didn't have to . . . that they could get all the work they needed."

Further, Interviewee #26 has had previous relationships with both minority- and women-owned businesses. Some of these relationships, according to Interviewee #26, have been very successful, but other of these firms he would "never have on [his] job again." He noted that a general or prime contractor is responsible for the quality and timeliness of subcontractorwork, and that it is "tough" to have to pay liquidated damages on a contract because "you've got a subcontractor that's not doing what he says . . . ."

When asked about his experience working with DBEs, Interviewee #34, a white male-owned business, stated, "I wouldn't distinguish my experience with the DBEs from any other subcontractor-consultants that I've ever used." He said that this was true of his experience using DBEs on work for Caltrans, other public sector work, and private sector work.

Interviewee #47, a white male-owned business, stated that the company has had mostly good experiences with DBE firms. They have experienced poor performance and firms going over budget; when this happens, they do not use these firms again. Interviewee #50, a white male-owned business, stated that he has worked with one WBE, and his experience has been good. Interviewee #51, a Hispanic male-owned business, indicated that the company's experiences using DBE subcontractors on projects (be they in the public or private sector) were no different than those with non-DBE subcontractors.

Interviewee #52, a white male-owned business, said that his experiences using DBEs on non-Caltrans public sector work and private sector work were the same as his experiences using any subcontractor.

Interviewee #61, an Asian American male-owned business, also stated that using DBEs on Caltrans projects was easy and successful. Interviewee #61 noted the same was said of using DBEs on private sector projects – it was an easy and a positive experience. Interviewee #67, a white female-owned business, does not subcontract out any work. Interviewee #67 said that, though she was not sure how often prime contractors are looking for a firm like hers to do conversions to CAD, prime contractors still keep a lot of work in house, that subcontracting work is all about positioning as a small business and how primes look at small businesses, and that it is important for her, as a small business owner, to see that the DBE program is not abolished.

Interviewee #69, a white male-owned business, never personally hired a DBE. But, Interviewee #69 has had experience with DBEs in that he has had to “clean up” a lot of their work. He said some of the DBEs have had to send two people for projects for which he would only send one. Interviewee #69 also worked with prime DBEs, but the problems tend to be with subcontractor DBEs.

Interviewee #76, a white male-owned business, stated that he utilizes the same subcontractors each time. Some of those subcontractors are DBEs, and while he might have initially used them because he was trying to meet some DBE requirement, he continues to use them because they do good work. Interviewee #76 works "within the family," meaning he only uses those companies with which he has a good working relationship and knows will get the job done – regardless of whether they are certified.

Interviewee #7, a white female-owned business, stated that their experiences using DBEs in the private sector and on non-Caltrans public sector work were the same as those using DBEs on Caltrans projects. Interviewee #7 stated also that they have no problems finding DBEs for private sector and non-Caltrans public sector work, since they use the Caltrans list to locate DBE firms no matter who is issuing the contract.

Interviewee #18, a Native-American male-owned business, explains that it is difficult even as a DBE to find other DBEs to work with it because a lot of them do the same type of work. For example, in a handicap retrofit project, which involves removing old concrete and pouring in new concrete, the subcontracting portion would be flat work concrete, which is in the company's own line of work. Thus, it is difficult to find subcontractors who want to bid to the company and break the project off to give away part of the work. Interviewee #18 has had some signal projects where the electrical work can be subcontracted out, but he stated that there are not many minority electrical contractors. In the area of striping work, Interviewee #18 has worked together quite well with some minority subcontractors. Most of the time, Interviewee #18 has good experience working with DBEs. Overall, Interviewee #18 is having a difficult time finding DBEs that do the type of subcontract work he needs.

Interviewee #11, a Native American male-owned business, recounted that the company's experience using other DBEs has been "very good." The company has built relationships with some smaller firms that are very responsive and who understand the Caltrans process, forms, and all of things that must be in a proposal. Interviewee #55, a white male-owned business, has used a minority DBE as a subcontractor for some work that it performed as a prime contractor. Interviewee #55 has never bid out projects to companies based on the fact they might be disadvantaged, minority, or female-owned, stating, "I don't ever go into a bid with that specific thought. Now, I say 'who is the best company for this project?'"

Interviewee #19, a Hispanic male-owned business, does not know whether their subcontractors are DBE registered, and they do not check their DBE status, but some of the subcontractors are in fact minority-owned. The company has not yet needed to determine whether its subcontractors are DBEs. Interviewee #31, an African American female-owned business, said that his company uses "anyone that has the capabilities" but noted that, though there are not that many DBE firms out there, the company "whenever possible . . . tr[ies] to promote utilization of WMBEs."

According to Interviewee #46, an Asian American male-owned business, some of the company's subcontractors are MBEs and WBEs, but "[i]t all depends on what job . . . ."

CATA #6, a trade association representing heavy engineering contractors, recounted "[t]hey'll use whoever their going to use regardless of whether they are a DBE or not." The contractor wants to use who they feel comfortable with. "Ultimately, at the end of the day it's who is low bid." On private projects, more than public, contractors can be more picky on the subcontractors that they use, but on

a low bid scenario they're probably just going to go with the low bid, regardless of whether they are a DBE."

CATA #6 stated that a lot of times people do not disclose that they are a DBE contractor so the prime does not know that they are using a DBE contractor until they go to list their subcontractors. "I don't think there has been any change" since the suspension of the goals. There was never a requirement to use DBEs, you just had to have a good faith effort. It was the choice of the prime whether they would use a DBE. She does not feel there is a preference currently for contractors who use DBE subcontractors. CATA #6 indicated that subcontractors are used by the same primes in the public and private sector.

A non-DBE engineering firm, stated: "there seems to be a shortage of DBE certified firms for most service areas. We have found on many occasions that there are simply no DBE firms or no DBE firms available. We feel that including DBEs on our team even in non-required situations not only assists in promoting diversity, but quite frankly increases our chances of winning those projects that we would like to be working on. Obviously, the lack of these special firms creates a number of issues." (Written testimony submitted 4/16/07).

Utilization of DBEs by Prime Contractors in Public vs. Private Sector

Some subcontractor interviewees reported that different prime contractors used them in the private sector as used them in the public sector. CATA #10, an Asian American trade association, stated the same prime contractors do not necessarily use the same subcontractors in the private sector as they do in the public sector unless they have a long relationship "because they only were hired because they had to meet the goal." Otherwise, "in our business, it is the good ole' boy network." Some prime firms will use a member firm in the public sector because they are DBE or minority or have a good reputation but then will not use them in the private sector. He stated this happens "most of the time." He stated in particular after Proposition 209 and after implementation of the race-neutral program this situation is more noticeable.

CATA #9, an association of consulting, engineering, and land surveying firms, stated that with respect to DBE utilization, it is completely different in the private versus the public sector. He stated that his members who have worked for a prime in the public sector have been unsuccessful in obtaining work from that same prime in the private sector; he stated this is based on cost. He stated that a prime will only use a subcontractor if it is cheaper than using their own staff; he said in the private sector you will see a mark-up on a subcontractor anywhere from 15-25%.

CATA #1, an Asian American trade association, and CATA #3, a Hispanic trade association, stated that there was no cross-over between the primes that use his company as a subcontractor in the public sector and those that do so in the private sector, and that there is very little, if any, of this cross-over between the prime contractors that subcontract work to the Association's members.

Interviewee #43, a Native American male-owned business, stated that he has not used the same subcontractors in the private and public sectors. Interviewee #43 supposes he could potentially use the same subcontractors in both the private and public areas (welders/electrical) though he has not done so.

Interviewee #65, a white male-owned business, does not use the same subcontractors in the private sector as in the public sector because the insurance requirements changed, and he was no longer able to afford the insurance.

Interviewee #11, a Native American male-owned business, stated that the company's experience in the private sector is that since the clients are not held to a bidding process, the clients value relationships more than anything else. In his experience, there has been no overlap between the primes that use the company in the public sector versus the primes that use the company in the private sector. Interviewee #11 explains that in the private sector, the primes like to keep most of the work in-house and there is no effort to use DBEs.

Interviewee #57, an Asian American male-owned business, noted that the prime contractors who use the company in the public sector do not use his company in the private sector. Interviewee #59, an African American male-owned business, noted that the same prime contractors who use Interviewee #59 in the public sector do not use the company in the private sector.

Many stated that prime contractors tend to specialize in either public or private sector work. According to Interviewee #33, a Hispanic female-owned business, and Interviewee #43, a Native American male-owned business, the prime contractors that use their companies in the public sector do not use it in the private sector because they are a "different group of people." Interviewee #33 said that most of the prime contractors for whom she works on public sector projects "don't even do private work." Interviewee #54, a Hispanic male-owned business, said that he does not subcontract out any work, and that he works as a subcontractor only in the private sector, and thus the contractors that use him in the private sector do not use him the public sector.

Interviewee #48, an Asian American male-owned business, indicated that the company did not use the same subcontractors in the public and private sectors because these were "completely different areas." According to Interviewee #65, most of the contractors performing public works jobs do not do private work – he does not think that he has ever run into one (at least with Caltrans).

According to Interviewee #79, an African American male-owned business, prime contractors who use him in the private sector are different than the primes who use him in the public sector. Interviewee #81, a Hispanic male-owned business, said the people he works with on public projects do not perform private work. Interviewee #61, an Asian American male-owned business, agreed.

Interviewee #14, a white male-owned business, uses different contractors depending on whether it is working in the private or the public sector. According to Interviewee #26, a white male-owned business, there are different groups of contractors who do private work and who do public work, in part because of the prevailing wage requirement for public work, and thus it is "fairly rare" to use the same subcontractors for private and public sector work—"you have public works people and then you have your private works people."

Interviewee #48, an Asian American male-owned business, stated that the prime contractors that use his company in the public sector do not use it in the private sector, and that his company had not attempted to obtain private sector work from a prime contractor that used his company in the public sector. Interviewee #48 stated that the company's private sector work is risk management work for the insurance industry (namely surveying and imaging) whereas its public sector work is more

research and development, thus the company's public and private sector work is for different types of firms.

Some interviewees reported using the same subcontractors in both sectors. Interviewee #13, a Pakistani male-owned business, stated that his firm sometimes subcontracts out the drilling work on its projects, and that he uses the same subcontractors on both public and private sector projects. He was "personally not aware" of whether these firms were DBEs, stating "some maybe, some maybe not" and that "[i]t is not of concern to me." Interviewee #13 stated further that he did not have to contact DBE firms since his firm is a DBE, and therefore itself satisfies DBE goals or requirements on Caltrans and other projects, and that "being a DBE I wouldn't be hunting a DBE firm."

CATA #9, an association of consulting, engineering, and land surveying firms, stated that his members use the same subcontractors in the public sector as they do in the private sector, typically on development projects, residential and commercial (structural engineering, electrical, mechanical, land surveying, and water resources subcontractors). He stated that DBE utilization is not tracked on the private side but he knows that a lot of the subcontractors are DBEs. Most of these projects are below the $1 million range.

Some DBE firms reported that the same prime contractors who used them in the public sector also used them in the private sector. Interviewee #68, a white male-owned business, and Interviewee #62, a white male-owned business, stated that the same contractors for whom they do work as a subcontractor in the public sector also use their firms for private sector work. Interviewee #49, an African American male-owned business, stated that his company uses the same subcontractors, which he said were both MBEs and WBEs, in both the public and private sectors, and that these subcontractors are used for electrical, street lighting, concrete (curbs and gutters), and striping work. Interviewee #61, an Asian American male-owned business, stated that the same primes that use the company in the public sector use it in the private sector. As indicated by Interviewee #42, an African American male-owned business, there are “one or two” prime contractors who use him both in the public sector and in the private sector.

When asked whether he used the same subcontractors in both the public and private sectors, Interviewee #47, a white male-owned business, stated, “[y]es, you utilize firms that you are comfortable working with and you know that can deliver the work on time and on budget.” Interviewee #46, an Asian American male-owned business, stated that the company uses subcontractors for fiber optics and low voltage communication work, and that it "more or less" uses the same subcontractors for this work in both the public and private sectors.

Interviewee #13, a Pakistani male-owned business, indicated that the same prime contractors that use his firm as a subcontractor in the public sector are not the same ones that use his firm as a subcontractor in the private sector, and that there are primes for whom his firm works for often, though "not as a DBE." According to Interviewee #13, he has a "very long term relationship" with these primes, they are "very happy" with his work, and "any time there is a project where they need geotechnical engineering service[s] they put me on the team whether there's a DBE requirement or not."

Interviewee #56, a white male-owned business, stated that the same prime contractors who use his company for Caltrans work use his company for other work in the public sector. He has the same types of equipment to supply for both Caltrans and non-Caltrans projects. Interviewee #56 does not

generally perform private sector work. Interviewee #50, a white male-owned business, uses the same subcontractors in the private sector as he does in the public sector. Interviewee #47, a white male-owned business, stated that the same primes use them in public and private, depending on the work.

Interviewee #10, an African American male-owned business stated that "some" of the prime contractors that use his company in the public sector also use them in the private sector.

Interviewee #27, an African American male-owned business, stated that the same prime contractors for whom the company works in the public sector also use the company as a subcontractor in the private sector and that these contractors are local companies. Interviewee #27 indicated that the company performs for these primes in the private sector a broader range of work than it does for them in the public sector, including not just underground work but also sidewalks, curbs, gutters, and fences. Interviewee #27 also stated that he could obtain the private sector work that he wants from these prime contractors, but that the company is usually busy enough working on their Caltrans jobs. According to Interviewee #27, "[i]t just depends on how far you want to go and how hungry you want to be."

When asked about usage, Interviewee #58, a white female-owned business, stated that the same prime contractors who use the company in the public sector use the company in the private sector. These have been a full range of contracts ranging from $10,000.00 to $1,000,0000.00.

Interviewee #31, an African American female-owned business, stated that the prime contractors that use the company in the public sector also use it for work in the private sector, since the scope of the work is "almost identical" and the same civil engineers who work for Caltrans and other agencies also contract for work with private land developers. Interviewee #34, a white male-owned business, stated that the same prime contractors that use the company as a subcontractor in the public sector also use them in the private sector. Interviewee #34 said that the jobs on which they work as a subcontractor are generally more narrow in scope (e.g., a biological survey or air quality and noise study) than when they work as a prime (e.g., as the overall or coordinating environmental consultant).

Some subcontractors stated that they received private sector work after working for the prime in the public sector. According to Interviewee #39, a Hispanic male-owned business, stated that the small amount of work that the company does in the private sector is for the same prime contractors for whom it works in the public sector. According to Interviewee #39, these jobs usually come about when the company is working for a prime contractor on a public sector job, another "little job" that is "usually very small" comes up, and the prime contractor asks them to do this job as well. Interviewee #39 summarized the relationship between these small private sector jobs and its public sector jobs as follows: "[I]f we don't get the public job, we're probably not going to get the private job."

Interviewee #19, a Hispanic male-owned business, has been called and used as subcontractors in the private industry based upon the relationships built while working with Caltrans.

Interviewee #46, an Asian American male-owned business, stated that the same prime contractors that use the company for public sector work also use the company in the private sector, mainly for street lighting and installing conduit systems for their utilities. Interviewee #46 indicated that the price range for these private sector contracts was the same as the price range of its contracts for the same work in the public sector.

Interviewee #51, a Hispanic male-owned business, indicated that the firms that use the company as a subcontractor in the public sector also use it in the private sector, and that once his company gets the chance to work for a prime contractor and demonstrate its abilities, the relationship continues for the prime contractor's work in both sectors. Interviewee #51 said that "it goes both ways."

Interviewee #65, a white male-owned business, noted that, with regard to the school district projects in which his company has engaged, those public contractors have used him in the private sector.

Interviewee #66, a white male-owned business reported that the subcontractors for whom he works use him in both the private and public sectors. Interviewee #66 said that he "vary rarely" gave out work to other firms and that we he did so, he did so on a limited basis with close friends who own trucks.

CATA #2, an African American trade association, stated that he had never looked for (and thus never seen) any cross-over between the firms that use the Association's members for subcontracting in the public and private sectors but that he was "quite sure that [cross-over] happens." He noted that there are no DBE goals on private sector projects and said that his company subcontracts out only public sector work. CATA #2 said that the Association's members use the same subcontractors in both sectors "all the time." According to CATA #2, once a marriage between firms is made, it stays to together, and the businesses support each other in both sectors.

Interviewee #30, an Asian American male-owned firm, stated that while logic would suggest that prime contractors would use DBEs in the private projects after having worked on projects with the DBE in public projects, practically speaking, he does not believe that it happens. He states that the prime might have a whole plethora of subcontractors to pick from and in the private sector most of it comes down to price.

Some prime contractors reported using the same subcontractors in both the public and private sectors. Interviewee #7, a white female-owned firm, stated that the company uses the same subcontractors for both its private and public sector work. The company subcontracts out work for aerial mapping, speed billing, traffic counts, and some architectural work, including with DBE firms.

Interviewee #1, a Native American male-owned business, stated that he also uses the same subcontractors in the private sector as he does in the public sector. When he utilizes subcontractors, it is for specialty testing like for pesticides and radioactivity. According to Interviewee #1, these are generally not DBEs or M/WBEs.

Interviewee #5, a white female-owned business, uses the same "core group" of subcontractors for its work, though which subcontractors are used depends on where the work is located. Interviewee #5 uses the same subcontractors in the private sector that it uses in the public sector. Interviewee #5 stated that the company uses subcontractor DBEs to do as much as twenty percent (20%) of the work on some projects, but that on other projects the percentage is zero.

Interviewee #58, a white female-owned business, uses the same subcontractors in the private sector as in the public sector, and these companies generally perform very specific technical pieces of work with a general worth of $25,000. Similarly, Interviewee #10, an African American male-owned business, relayed that his company uses the same subcontractors in the private and public sector.

Interviewee #10 said that most of the subcontractors that the company uses on public sector projects are DBEs, but that "we don't use them [DBE subcontractors] all the time" on private sector jobs.

Interviewee #17, a white male-owned business, stated that the company does use the same subcontractors in the private and public sector, mainly for subcontracting surveying work Interviewee #17 also stated that though the company "sometimes ha[s] a call for DBEs" in the private sector, this happens "very rarely" since "it's mostly in the public [sector] if we use them at all." The firm has used DBEs on public sector work for the Metropolitan Water District, the Eastern Municipal Water District, and other agencies.

Interviewee #19, a Hispanic male-owned business, uses the same subcontractors in both the private and public sectors, however, Interviewee #19 points out that if the client requests that they use a different subcontractor, then it will comply.

Interviewee #31, an African American female-owned business, stated that it performed most of its work in-house, but occasionally uses subcontractors for potholing for both its public sector and private sector work. Interviewee #32, an Asian American female-owned business, said that her firm uses the same subcontractors in the public and private sectors, and that these subcontractors are local DBE firms to whom she subcontracts out environmental work. Interviewee #44, a Middle-Eastern male-owned business, also uses the same subcontractors in the private sector that he does in the public sector, but doesn't know if any of them are certified as a DBE. Interviewee #44 subcontracts traffic light work, landscaping, and other small projects.

Interviewee #33, a Hispanic female-owned business, said that when her firm is the prime contractor, it tends to use the same subcontractors, but that "it varies." She said that some of the subcontractors are DBE firms but noted that she does not need to use DBE firms to satisfy a DBE goal on a project. Interviewee #33 stated that "all else being equal, [she] will choose the WBE and/or MBE firms" but that if a particular firm has experience that will help her company get the job, she will use them "regardless of whether they're WBE or MBE."

Interviewee #34, a white male-owned business, stated that the company uses the same subcontractors in the private sector that it uses in the public sector, and that these subcontractors usually are specialty firms. Interviewee #34 said that some of these firms are DBEs on specifically subcontracts that the company uses for endangered species surveys, geotechnical work, public participation, landscape architect, and biological work. Interviewee #35, a white female-owned business, uses the same primes in the public sector as in the private sector. Interviewee #35 uses some female DBE subcontractors and one ethnic minority subcontractor who is not certified as a DBE in the public and private sector.

Interviewee #45, a white male-owned business stated that "in general," he uses the same subcontractors in the private sector as he does in the public sector. With respect to whether he has attempted to use DBE/MBE/WBE subcontractors in the private sector that he used in the public sector, Interviewee #45 stated that if they are the low bidder, he will use them.

Interviewee #45 stated that everyone has to follow the rules. Interviewee #45 noted that "everyone has a perception that DBEs come along and we have to foster them to bid in those situations they can't survive." Interviewee #45 stated "Caltrans gives no leniency after you get the job, they don't

care if the guy quits the job, Caltrans said we have rules if you have to replace the subcontractors we don't care if it's a DBE. When subcontractors go down it is a problem to the [general contractor]."

Interviewee #51, a Hispanic male-owned company, stated his company uses the same group of suppliers and subcontractors that it likes working with in both the public and private sectors for concrete structures and hot-tapping work, as well as for trucking, landscaping, and sweeping. Interviewee #51 also said that the company "do[es] not care if the guy is a minority or not a minority or disadvantaged or not disadvantaged" but instead cares if the subcontractor can do a good job and meet the criteria of the specifications, and that the company wants to help minorities "in every way [it] can" and "prefer[s] to use DBEs or . . . veterans . . . ." so long as they are going to do a good job and help the company meet project requirements. Interviewee #51 also stated that though the company generally uses the same subcontractors, it was open to developing and had developed relationships with new subcontractors and suppliers.

Interviewee #68, a white male-owned business, typically uses the same subcontractors in the public and private sectors, and it subcontracts out work to botanists, biologists, irrigation designers, and lighting engineers. Interviewee #68 said that the firms he uses as subcontractors are local ones, including a WBE that he used "all the time," but which was no longer in business.

Interviewee #52, a white male-owned business, stated that he sometimes subcontracts out work. He said that he uses the same subcontractors for the same work in both the private and public sectors. Interviewee #52 also said that once one "get[s] good subcontractors . . . , you don't go out changing them." According to Interviewee #52, one of the firms that he uses (a geo-analytical firm) is a woman-owned business, and another is a minority-owned business, and he has used them both in the public and private sectors.

Interviewee #59, an African American male-owned business, uses the same subcontractors in the private sector as in the public sector, including DBEs, MBEs, and WBEs. Generally, Interviewee #59 subcontractors out contracts that are multi-disciplinary, particularly in the areas where he cannot provide services. Interviewee #59 has attempted with success to use the same DBE, MBE, and WBE subcontractors in the private sector that he uses in the public sector.

Interviewee #73, a white male-owned business, noted that if he worked in the public sector, he would use the same subcontractors there as he does in the private sector. These subcontractors probably are not DBEs. He subcontractors out back-hoe services, concrete cutting services and equipment rental.

Some DBE firms reported that various prime contractors only used them on projects where there was a DBE requirement. Interviewee #31, an African American female-owned business, said that "even if we work with that firm consistently in the private sector they will not call us unless there is a specific reason to do so if it is a Caltrans project[]" and stated further that "if Caltrans does not enforce or pursue utilization of WMBEs and specifically call for professionals in our area of expertise, the 'civils' [civil engineering prime contractors] are not going to call us up. I do not care how many projects we work with them [on] in the private sector, it is not going to happen."

CATA #1, an Asian American trade association, said that unless there is a DBE requirement (i.e., public sector), prime contractors will do in-house all the work they can and will use DBE firms only if these firms can provide services that the big prime contractors cannot do themselves. CATA #3, a Hispanic trade association, said that where there is no DBE goal (i.e., the private sector), prime

contractors do not "bring [DBE firms] into their fold of business," and that prime contractors will generally not use DBE firms for subcontracting where there is no requirement to do so.

Interviewee #13, a Pakistani male-owned business, noted that if the DBE requirement is there, . . . [it is] satisfied . . . . That's the only impact it [DBE certification] has made on my business. The primes who had been working with me the last twelve [or] thirteen years do not have to go to somebody else to satisfy DBE requirements. That's the only difference it can make."

Interviewee #9, a white male-owned business stated that his division uses the same subcontractors in the private sector that it uses in the public sector, and that most subcontractors were selected because of their qualifications and the need to comply with DBE "set-aside" requirements.

Interviewee #34, a white male-owned business, acknowledged that the company "consciously" uses DBE firms in the public sector because it helps them meet DBE goals and estimated that about twenty percent (20%) of the company's public sector work is subcontracted to DBEs. Interviewee #34 summarized the firm's DBE utilization practices as follows: "Well, to be truthful, I would say we are more conscious of . . . When we're doing private sector work, we probably are most focused on which subcontractor-consultants . . . we've had the best results with in the past. In the public sector, we're always conscious of the need to meet the various goals of the public agency. And I'm not saying those two objectives are mutually exclusive. It's just that there are times when, if you absolutely had your druthers, you might use one subcontractor over another, and that could potentially be at the expense of a DBE. And if you were working for a public sector client, it's conceivable that you might have made a different decision."

Interviewee #7 stated that they try to get private sector work from prime contractors that use them in the public sector but that they have not been successful, as prime contractors contact them only when they need to meet a DBE goal. According to Interviewee #7, there is no incentive for a project manager at a prime contractor to contract out work to them or other DBE firms in the private sector because project managers are rewarded and compensated based on how much work (and money) they can bring in to their firms.

Interviewee #7 felt that whether or not their firm actually got hired to work as a subcontractor on Caltrans and other public sector jobs depended on whether the prime contractor had satisfied the minimal DBE goal by using other DBE subcontractors. If the prime had done so, then their firm did not get the job, unless "they [the primes] need help." Interviewee #7 identified as an issue that in these situations where primes need immediate help, it is difficult for small DBE firms to provide the necessary personnel and equipment "with no advanced warning that this [work] was coming up."

Interviewee #43, a Native American male-owned business, stated the following: "What I have come to learn . . . of companies that are requesting quotes of DBEs . . . is that they are trying to fulfill some sort of obligation or requirement. And there's really not an interest in actually receive – they're more interested in just making the contact and requesting the bid, than they are in actually receiving a bid. So there must be some sort of quota requirement or something that they have to contact a certain number of DVBEs or DBEs in order to qualify for something. Ultimately, Interviewee #43 opines that they are more interested in making a contact and requesting the bid than in actually receiving it. He said this has happened more than once, and receives requests weekly. Interviewee #43 said he has, on occasion, followed up on quotes in which he was interested. He said the outcome of those is that there are delays and the "interest falls off pretty fast when you respond."

CATA #10, an Asian American trade association, stated that, in many cases, if there is no requirement, a prime will not use a DBE firm. CATA #10 does not have knowledge of a prime refusing to work with a DBE because it is a DBE. On a professional service contract, they will assemble a team, and the larger firm will not negotiate the price until they are awarded the contract. In order to assemble a team, a prime will ask for information from a subcontractor as "window-dressing" because the team is already assembled; they do not want it to get back to the public agency that the big firms are not "cooperating." Many times they won't do anything once they receive the information from the smaller firm.

Some DBEs stated that they are used even when there is no DBE requirement. Interviewee #1, a Native American male-owned firm, stated that in the past five years, he has had two three-year contracts as a subcontractor on Caltrans projects at a price of about $100,000.00 per year. He stated that these contracts did not have a DBE goal, and that he did not receive the contracts because he was a DBE.

Interviewee #32, an Asian American female-owned business, indicated that the prime contractors who use her firm as a subcontractor in the public sector (which is usually for the environmental portion of construction projects) do not do so in the private sector. Interviewee #32 stated that she had not worked for any prime contractors in the private sector. According to Interviewee #32, "in the private sector there's no need to subcontract to DBEs or small businesses. There's absolutely zero incentive for large businesses to subcontract out because the private sectors do not expect that."

Interviewee #3, an Asian American male-owned business, noted that the company uses DBE subcontractors only in the public sector. Interviewee #3's company uses small business subcontractors in the private sector, but is not as DBE-conscious as in the public sector. Interviewee #9, a white male-owned business, relayed that his division wants to work with people with whom it has worked in the past, and who can deliver and meet the firm's needs. His division uses DBE subcontractors in the private sector (where there is no DBE goal or requirement) if it thinks that these firms are good ones.

Interviewee #15, a white male-owned business, stated that he uses DBE's less frequently in the private sector just because he uses fewer subcontractors in the private sector generally. This is because he is not required to do so whereas in the public sector it is a requirement of doing business. When he does use subcontractors, he didn't feel that DBE status mattered either way. That is, Interviewee #15 said that there are excellent DBE firms that he uses for public and private sector jobs and there are excellent non-DBE firms he uses. The main difference seemed to be that when contracting in the public sector, he was required to do more subcontracting and to use more DBE firms in order to win bids so he does this.

Interviewee #68, a white male-owned business, said that because no agency ever required that he uses a DBE subcontractor, it was not something that he considered in his selection criteria.

Refusal to use DBEs:

No interviewee stated that they had refused to solicit or use a DBE based on race, ethnicity, or gender. Some interviewees stated that they refused to work with particular DBE firms due to issues with work quality. Interviewee #26, a white male-owned business, stated that while he had never refused to work with a DBE up front, he had used DBE contractors with whom he had experiences and from whom he now "would not solicit for subcontractor bids because [he] would not want them

on [his] job." Interviewee #40, a white male-owned business, stated that she had never refused to work with a DBE except for one company against whom her company filed a claim for failure to complete the work on a Caltrans project. Interviewee #56, a white male-owned business, indicated that he has never refused to work specifically with a DBE, but that there are just certain firms that he refuses to work with, regardless of their individual status and/or classification. Although Interviewee #65, a white male-owned business, stated that there was one time when the company refused to work with a DBE, "they worked it out." Interviewee #25, a Hispanic male-owned business, specifically stated that "no firm has ever refused to work with him because he is Hispanic." Interviewee #3, an Asian American male-owned business, noted that while he has never refused to work with a DBE, "he one time refused to work with a company who wanted to use Interviewee #3's DBE status to submit a bid, but who had no intention of actually having Interviewee #3 do the work."

Interviewee #42, and African American male-owned business, stated he has never refused to work with a DBE because "they worked pretty hard to get where they are . . . [and the] majority of them [are] pretty good."

Interviewee #18, Native American male-owned firm, has never refused an opportunity to work with a DBE, other than as part of the low bid requirement of the selection process. Interviewee #18 tries to favor DBEs when he has work that needs to be subcontracted out to other minority contractors but they are not always the low bidder. Interviewee #18 uses DBEs when he can. Additionally, the contractor may have a reputation about how they treat their subcontractors and how promptly they pay their subcontractors. Interviewee #18 avoids contractors that are in litigation in every job they do and the subcontractor's money gets tied up until the end of the litigation. According to Interviewee #11, a Native American male-owned firm, the company has declined to work with some DBEs, but only as a part of the normal teaming selection process.

CATA #9, an association of consulting, engineering, and land surveying firms, stated that he heard of firms refusing to work with a DBE, but then noted, "[t]hey didn't realize I was there. A couple of prime firms were talking about there's no good DBEs around, you know, they can't perform." He does not think it is common to state that in public. He does not have any knowledge of anyone refusing to work with a DBE because they are a DBE.

No DBE stated that another firm had refused to work with them based on race ethnicity or gender. However, some DBE firms felt that prime contractors were not genuinely interested in using DBEs. CATA #1, an Asian American trade association, stated that he had never refused to work with a DBE firm. When asked if a prime contractor had ever refused to work with his business or his members' businesses because they are DBEs, CATA #1 said that the refusal is "very subtle" and that the discrimination is not on the surface but rather is buried deeply in peoples' minds. And, said CATA #1, people show this discrimination through their actions (even though they do not outright say they do not want to work with a DBE firm).

Interviewee #8, a Hispanic male-owned business, noted that a prime contractor had never refused to work with him because it is a DBE, and that the company gets contacted "quite a bit" by prime contractors soliciting bids on Caltrans projects. This interviewee stated further that, "basically all the do is meet their good faith efforts and never have any intentions of using [the company]." Interviewee #21, a Hispanic male-owned business, indicated that he has never been directly been denied a job because he is a DBE, but stated that many times the company will get calls for the good faith requirements from companies that are known to do similar work themselves; it is obvious to

Interviewee #21 that such calls are not serious. Interviewee #29, a Hispanic male-owned business, stated that he has never had a company "refuse" to work with his company because he was a DBE, but he stated that in essence companies do exactly that by skirting good faith requirements. He noted further that, on occasion, when he has asked various companies soliciting bids what the nature of the work would be, that the response was "no, I just need your credentials."

Interviewee #31, an African American female-owned business, recounted an experience that happened a number of years ago when a South African firm had awarded a private sector contract and his company had been hired and put on the project team. The company as later fired because the owner of the South African firm did not want him working on the project. Interviewee #31 went on to say that "it has been really though breaking into the professional arena[,]" and noted that, "the majority of the time you are not going to see people of color in these meetings, whether it is on a public sector or a private sector project . . . ." Interviewee #33, a Hispanic female-owned business, stated that, to her knowledge, a prime had never refused to work with her because her firm is DBE, but she noted that, "[She doesn't] know what [firms] decide internally." Interviewee #27, an African American male-owned business, stated that a prime contractor had never refused to work with him because his firm is a DBE. Interviewee #39, a Hispanic male-owned business, did not think that another firm had outright and overtly refused to work with the company because it is a DBE, but he said that the company does "get the feeling that if it's not a DBE requirement, . . . they're [other companies] not going to seek [them] out."

Interviewee #46, an Asian American male-owned business, stated that his firm had never refused to work with a DBE. Neither had a prime contractor ever refused to work with his firm because it is a DBE firm. In fact, said Interviewee #46, "[u]sually [it's] the other way around [because] people really want you to bid the work." Interviewee #59, an African American male-owned business noted that a prime has never refused to work with him because he is a DBE, but he has felt like that was the case in certain situations.

Interviewee #67, a white female-owned business, shared her impression that, on the whole, prime contractors' efforts to utilize DBE firms now end at the good faith efforts stage, and primes keep work in-house to the maximum extent possible. Interviewee #25, a Hispanic male-owned business, stated that no firm has ever refused to work with him because he is Hispanic.

Interviewee #81, a Hispanic male-owned business, stated that a prime has never refused to work with him because he was a DBE. In fact, once they know you are a DBE and that you do quality work, "primes go nuts over you." Interviewee #81 often gets calls from a prime requesting a bid on private sector work; gets these calls by referrals, the average price of these contracts is $30,000.00; he usually gets the job.

Interviewee #82, a white male-owned business, does not think he ever used any DBEs and tends to use the same subcontractors each time. Interviewee #60, a Asian American male-owned business, never refused to work with another DBE, but he thinks that others have not worked with him because they already have other DBEs. Interviewee #60 thinks that his status is just an excuse for people not working with him.

Interviewee #42, an African American male-owned business, stated that he did not recall a prime contractor refusing to work with him because he is a DBE but "if they did it was . . . one of those sly type things." He stated that he has had experience with contractors being "very nice to you, but

they'd never hire you." Interviewee #7, a white female-owned business, stated that the company had never refused to work with a DBE firm and that no one, so far as they were aware, had ever refused to work with them because they are a DBE firm. Interviewee #7 stated that the philosophy of the larger firms was to do as much work in-house as possible, and Interviewee #7 stated that "if there's no DBE goal we don't get a call" and that primes simply "want to hit [whatever] the minimal DBE goal is." Thus, according to Interviewee #7, "on the private [side] they just don't hire us."

Interviewee #11, a Native American male-owned firm, stated the company has not been refused work because they are a DBE, although he has had the experience of having been put on a team because they were a DBE and then they were not used in the actual project work. Interviewee #11 noticed that with the larger firms, they believe that certain firms have either political contacts, certain experience to help them win the project as a prime, but once they get it because they have to report to their directors, a lot of times they will drop those firms and keep the work in-house so they can improve their bottom line.

Interviewee #57, an Asian American male-owned business, stated that, to his knowledge, has ever refused to work with him because his company has DBE status; he thinks to state otherwise would be more of a speculation. Interviewee #58, a white female-owned business, has been approached by firms on the basis of the company's WBE status and refused work – either they didn't need that companies services, or they already had their internal team together. She has never refused to work with a company because of its certification, nor does she think that anyone has refused to work with the company because of its certification.

Interviewee #20, an Armenian male-owned DBE business, has not yet submitted any bids for any Caltrans projects. He has never been refused a job or been put on a job because he is a DBE, since he has only been certified for a month.

Caltrans Bidding Process

Interviewees reported varying degrees of experience with Caltrans bidding. Interviewee #40, a white male-owned business, has done substantial work with Caltrans, and stated Caltrans forms are repetitive from job to job and have been fairly straightforward for several years. The process is uniform and cut and dry, but now that there is no DBE or DVBE requirement, he said makes the process much easier. "When you're low bid you get the job. If you're not low bid, then you don't get the job. They're pretty simple as far as that goes." Interviewee #40 has not had much experience submitting through RFPs to Caltrans, but notes that process is generally for the smaller agencies and local government entities. Interviewee #40 stated that Caltrans' phone system when she has questions is time consuming, but that in general it's easy to get the necessary information to complete bids.

With respect to the Caltrans bidding process, Interviewee #45, a white male-owned business, stated: "that's our life." They've learned the ins and outs and they abide by it per se. He said 10 years ago when they were "demanding" DBE utilization, it was "very difficult to choose the low bidder and also have the (DBE) percentage [and] now its just a mere fact of low bid" and they give you their best price.

Interviewee #47, a white male-owned business, reports that Caltrans work is their "bread and butter." He thinks the bidding process is "working fairly smoothly now." Caltrans has established "some schedules within the proposal process to let you know … when the interview is going to be … and if

you have been selected for the work when the negotiation schedule is going to be." This has "reduced the time frame from proposal submission to contract issuance." Caltrans "is doing a better job now."

Others interviewees reported limited experience with the Caltrans bidding process. With respect to bidding with Caltrans, Interviewee #6, a white female-owned business, stated that "[i]t's not like they're sending me bid packages to bid on . . . . " Instead, a Caltrans employee comes into the store to purchase "necessary items" (i.e., things that Caltrans needs right away), and thus #6 has no experience with the Caltrans bidding process. Interviewee #6 stated that the company has never had the opportunity to bid anything with Caltrans, but that it would bid if Caltrans were "more proactive" and solicited bids from the company.

Interviewee #38, an Afghan male-owned business, had no experience with the Caltrans bidding process. He stated that he typically found work by word of mouth within the Afghan community of dirt haulers. He stated that he would very much appreciate hearing about work opportunities from Caltrans and that he and his friends were willing to travel anywhere in the state to obtain work, but that they lacked readily available information sources. None of them owned or had easy access to computers and so internet listing of projects would not be helpful to them. Interviewee #38 also suggested that more transparency should be required on the part of the contractors for whom they work as to how much Caltrans was being billed for their services. Interviewee #38 believes that not only is he being underpaid for his work, but that the contractors are then over-billing Caltrans and the other public agencies as well.

Interviewee #44, a Middle-Eastern male-owned business, reported no real experience. He tried to place a bid once; he called for the specs but never heard back. Interviewee #44 feels he is not given adequate notice of Caltrans bidding opportunities. He usually hears about them through Caltrans advertisements, but when he calls for more information, he cannot reach a live person. He leaves messages but no one ever calls him. He usually contacts subcontractors regarding submitting a price quote, not the other way around. Interviewee #44 recommends making the Caltrans bidding process more accessible to the public. He also feels the process in general is too complicated; he "got scared" and stopped trying to participate. When asked what scared him, Interviewee #44 replied that the engineers have an attitude about how things should be done.

Interviewee #48, an Asian American male-owned business, had only one experience with Caltrans' bidding process, when his company was part of a team that bid on a contract to pilot-test software. Interviewee #48 stated that the job went out to bid and the prime contractor with whom this company bid wound up getting the job. Interviewee #48 felt that the job was advertised well, but he noted that he could speak about only the advertisement of this particular job and not Caltrans' advertising of its jobs generally. Interviewee #48 stated that he had never been denied the opportunity to bid work for or submit a price quote to Caltrans.

Interviewee #52, a white male-owned business, stated that he more or less takes what work comes to him and does not really look for it. He said that he had bid some government jobs for on-site safety and quality operations for the federal government in California, and that on the one Caltrans job on which he had worked, the prime contractor reached out to him. Thus, Interviewee #52 stated, he did not have much experience with Caltrans' bidding process.

Interviewee #54, a Hispanic male-owned business, had no experience with Caltrans' bidding process, but he stated that Caltrans does not adequately notify businesses of work opportunities or make it

known that there is a bid opportunity. He said that, since he had never been notified about a Caltrans job, he "would say" that he had been denied the opportunity to bid work for them.

Interviewee #59, an African American male-owned DBE/MBE business, has not had a lot of experience bidding with Caltrans because the bonding requirements are so high for the construction portion of their projects. The design work that the company has done is in the role of subcontractor - the company cannot compete with the larger firms. There have been bid teams that Interviewee #59 has been a part of for Caltrans work but he has never received any of that work. Interviewee #59 does have an on-call contract of which he is supposed to receive thirty per cent (30%) of the work, but he has seen nothing, and it is the third year of the project. Interviewee #59 notes that when the DBE program was enforced, the bidding process was easier because the primes would call the company and then request a "suite of disciplines" that they knew the company would be offering.

According to Interviewee #66, a white male-owned business, he was not too familiar with Caltrans' bidding process because he works with subcontractors on Caltrans projects, and these subcontractors bid to primes (who in turn bid to Caltrans). The subcontractors call him with the work. Interviewee #66 said that he had never seen anything giving him the opportunity to bid and that nothing had ever been sent directly to him. He also said that to him it seems like most of the trucking jobs come through general contractors, and that he did not know how to find out about what primes are bidding on Caltrans jobs, outside of contacting them directly.

Interviewee #25, a Hispanic male-owned business, has never submitted a bid or RFP to Caltrans and thus has no experience with the Caltrans bidding process. Interviewee #25 stated that he would like to work for Caltrans but that he doesn't know how to go about doing so.

Interviewee #42, an African American male-owned business, stated that he has not “seen” the Caltrans bidding process in a long time “but I know you have to have a bond along with the bid.” As per notice, he stated “the blue book sends me stuff all the time but I haven’t really seen much in regards to just Caltrans work.” He stated that “it costs too much money to get a lot of information” on bid opportunities. He stated he has never been denied the opportunity to bid with Caltrans.

Positive experience.

Some of the interviewees described the bidding process as neutral or positive. When asked about his experiences with Caltrans' bidding process, Interviewee #8, a Hispanic male-owned DBE, responded that "[i]t seems to be okay." He stated that there is "room for improvement" in Caltrans' advertising and providing notification of its contracts but that "it's not too horrible."

With regard to the Caltrans bidding process, Interviewee #9, a white male-owned business, stated only that "[i]t is a bidding process." Interviewee #9 stated the firm prefers to be hired based on its qualifications, and not necessarily on price or fee, but that only sometimes does Caltrans use "a truly qualifications based selection."

Because the company is a professional services business, Interviewee #19, a Hispanic male-owned DBE business, reported that it is not engaged in the outright bidding process. Rather, only Caltrans knows how they determine their selection. It is an interview process of the various teams, interviews and then a rating or a point system. Interviewee #19 stated that he has not seen any major problems, but he said that it is a "necessary evil" and has become better over the years.

Interviewee #21, a Hispanic male-owned DBE business, reported that the company has been successful in bidding on Caltrans projects in the past. The company believes that the Caltrans bidding project is fair.

Interviewee #29, a Hispanic male-owned business, believes the opportunity to bid or to submit a price quote, is straightforward and you just have to "follow the process."

CATA #2, an African American trade association, bids a fuel contract with the State of California through its Department of General Services and then supplies fuel to Caltrans (and other agencies) from this contract. The Association's members, he said, had found Caltrans' bidding process to be "a pretty good process."

The company has been short-listed for prime work several times, but has not made it past this point. Interviewee #11, an African American male-owned DBE business, has noticed that recently Caltrans shortened the presentation part of the interview, and he believes that this is a "positive thing, because anyone can pretty much stand up there and present their qualifications." Interviewee #11 believes that the Q&A sessions are more productive. However, Interviewee #11 believes that Caltrans' interview questions are "sanitized," and thus Caltrans lack the ability to ascertain the quality of the team beyond their "canned" list of questions. Interviewee #11 recommends that Caltrans should allow for some follow up questioning so that there is more interaction. Interviewee #11 observed that sometimes the interviewers are "bored." As a subcontractor, Interviewee #11 observes that the Caltrans process has been "fairly smooth."

An educational provider stated, "having provided supplier services to DOT, Caltrans on several limited-content training contracts, I have found no difficulties relative to bidding or on designated RFQs or RFPs." (Written testimony submitted 3/12/07).

A non-DBE, stated: "We do not face any difficulties or barriers when bidding." (Written testimony submitted 3/16/07).

A Native American DBE, stated the competitive bidding process is not self-explanatory and the DBE program has assisted first time contractors and taught them how to "qualify, compete, and meet deadlines." (Written testimony submitted 3/20/07).

Negative experience.

Of those with experience regarding Caltrans bidding process, approximately half of interviewees reported some negative experiences. Interviewee #3, an Asian American male-owned business, said that Caltrans could be more "user-friendly" in the bidding process.

Interviewee #5, a white female-owned DBE business, expressed that the company had overall unfavorable experiences with Caltrans bidding, particularly over the last few years. Interviewee #5 stated that the company had no experience being denied the opportunity to bid or submit a price quote, but he did state that the Caltrans bidding system "is broken," the bid inquiry system is "very poor," and bidder inquiry is a "huge problem" that Caltrans needs to fix. Interviewee #5 felt that Caltrans uses unreasonable working days, makes unreasonable requests, and uses cost and reimbursement figures for equipment rentals, fuel, and other materials that are not reflective of actual current market prices. Interviewee #5 also stated that Caltrans' bidding does not account for opportunity costs incurred by contractors doing work for Caltrans.

A female business owner stated that she has been excluded from the bidding process and even though she has "done some business with a couple of your facilities, after an order or two I've been told that they may no longer purchase from me even though my prices, quality and availability are better. . . . The reason I have had any success at all in government is because outside of the bidding process my quality, prices, and availability are always better. . . " (Written testimony submitted 4/4/07).

A DBE and 8a company, stated they are currently involved in a situation with a municipality in which they were announced as the low bidder but the municipality has since asked them to withdraw their bid allegedly based on minor match errors in the bid ($32.00 worth). The municipality informed them they were going to closely scrutinize their references. They are waiting to hear from the municipality. (Written testimony submitted 3/26/07).

Interviewee #73, a white male-owned business, has probably bid Caltrans work eight (8) times over the last ten (10) years and was awarded none of the contracts. At this point, he pretty much considers Caltrans bidding to be a waste of time. He said he does not know why he did not receive the bid because he did not get any feedback.

An African American DBE electrical company testified at a public hearing in Oakland that one of the barriers to bidding Caltrans jobs is that "you changed your measurement to metrics … no body knows how to read those metrics, so they're guessing at it now … most of your MBE's … they don't know anything about construction." (P. H. Oakland, 3/27/07).

A few of the interviewees stated that their negative experiences issues were due to the fact the bidding process was cost, time and/or labor intensive. Interviewee #4, a Native American male-owned business, stated that after Caltrans started doing architect and engineering work in-house, the company spent too much time and money bidding and working with other companies to submit bids for work that was no longer available. It is for this reason that the company let its DBE certification expire. Interviewee #4 felt that it was costing the company more than it was worth to continue to submit bids (mainly because of opportunity costs of time and other resources).

Interviewee #14, a white male-owned business, reported that the firms he generally sub-contracts with on Caltrans projects range in size between 2000 and 5000 employees. In his opinion, it is only with that kind of scale that working directly with Caltrans makes sense because the permitting process is so long and burdensome. According to Interviewee #14, contracting with Caltrans takes about 6 months whereas sub-contracting with primes who have already gone through that process is much faster and so cost-effective. It also means that the Company needs fewer people on staff whose sole job is dealing with the contracting process.

In addition, as compared to local agencies, with which the Interviewee #14 has a much better relationship, Caltrans does not design contracts with companies of all sizes in mind. The company is just not big enough to bid on many Caltrans contracts. What ends up happening is that the really big firms come in, bid successfully on the Caltrans contracts, and then break them up into manageable chunks for the mid-size firms like Company.

At the same time, often, Interviewee #14 loses out to the big firms because they will often choose not to subcontract on projects, instead setting up a local office for the job and keeping the work in house. In addition, Interviewee #14 felt that DBE requirements with respect to Caltrans dollars are quite confusing. As evidence, he points to the fact the Company has an employee on staff whose job is to

advise local agencies on compliance with DBE requirements. Thus the local agencies who are trying to comply with the DBE program are often confused as to its requirements and require expert guidance.

Interviewee #15, a white male-owned business, felt that public sector projects in general and Caltrans projects in particular, were substantially more complicated to bid for than private projects. Part of the reason for this are the DBE requirements but there are many others. Basically, public contracts, perhaps of necessity, have a process that must be followed whereas private contracts only require what is necessary on a case by case basis. Interviewee #15 did mention that there were at least some public road contracts that were funded by Caltrans where his firm had decided not to bother with submitting a bid because of the administrative hassle of doing so. He did not feel however that the bid process was confusing or difficult to participate in – just complicated and time consuming.

According to Interviewee #16, a white male-owned business, the company does not really bid with Caltrans. Instead, Caltrans contacts them wanting to use their product (a debris deflector) on its bridges. Caltrans then installs the product itself. Interviewee #16 did note, however, that there is an inflexibility in the Caltrans procurement process. Interviewee #16 stated that his company is a debris deflector provider, and that the product is unique, specialized, and protected by a patent. He said that "because it's not a generic off-the-shelf product, the Caltrans bidding process doesn't allow for any kind of . . . leniency for this kind of thing." Interviewee #16 felt that the Caltrans bidding process favors generic work and is inflexible in the sense that Caltrans is not allowed to be innovative and use products like his company's, which are sole source products, and stated that "from an innovative standpoint there's not a lot of flexibility." Interviewee #16 also felt that the Caltrans process was very paperwork-heavy, saying that California is "probably in the top two [states] . . . in paperwork." Interviewee #16 relayed that it took the company six (6) months to fill out all the necessary paperwork for Caltrans and that "they [Caltrans just kept popping up more stuff."

Interviewee #17, a white male-owned business, described the Caltrans bidding process as "very laborious," "very difficult," and "very expensive more importantly." According to Interviewee #17, "[i]t's a multi-step process that takes a lot of hours on our part to put together a proposal and there's no benefit because we can't get one of the jobs." Interviewee #17 stated that participating in the Caltrans bidding process essentially "becomes a decision of return on investment" and that his firm has "basically given up."

Interviewee #33, a Hispanic female-owned business, described the Caltrans bidding process as "very tedious" and "time consuming," and she felt that Caltrans "waste[s] a lot of time." She said that firms "spend an awful lot of time and money" going through the request, response, and interview process, but she also said that Caltrans' process was "fairly typical with all public agencies" and that she was "not sure that they do [things] any different[ly] than most public agencies would."

Interviewee #64, a white male-owned business, reports that the jobs that include work in his field just say "road work and traffic signal work." There is no way for him to know how much is traffic signal work and how much is general road work. He tends to stay away from Caltrans because the size of the project is so large that bonding becomes a problem for him. The jobs are listed as $100,000 to $499,000, even though maybe only a small portion of the job is actually traffic work. In order to bid this job, he has to tell his bonding company that the job could be $499,000. He is bonding to $500,000, so to bid this job he would have to use up all his bonding capacity. He would like Caltrans to separate the work. He would also like the bid to be more precise in their engineers estimate – he

does not understand the disparity between $100,000 and $499,000. He is notified through email when there is a Caltrans project. The service is called "CSCR-SOS Newly changed contract opportunities." He does not know any other way of obtaining information about Caltrans projects. The description is not very good. He wishes the scope of work was better described. He get solicited on all the projects in his area for his type of work because is one of only two who do this type of work. There are only three main primes in his area.

CATA #3, a Hispanic trade association, stated that when his company tried to go after work as a prime contractor in the early 1990s, he found Caltrans bidding process to be "very frustrating" and difficult to penetrate and/or navigate without any direct experience working for Caltrans. Moreover, said CATA #3, even if you can get short-listed, Caltrans' interviewers are "not receptive" to awarding contracts to new firms with whom they are not familiar. CATA #3 also said that bidding for Caltrans work involves/requires a lot of marketing and that whereas civil engineering firms can do their marketing on the local level, structural engineering firms have to do their marketing in Sacramento. Small businesses, he said, do not have the resources to do the necessary marketing.

Interviewee #43, a Native American male-owned business, cited “not being familiar with the Caltrans bidding process and requirements” as an obstacle to pursuing work. An African American DBE electrical company testified at a public hearing in Oakland that he has not bid a Caltrans project since 2003 "because it costs me money to get these plans." (P. H. Oakland, 3/27/07).

A woman DBE travel agent identified the lengthy certification process as a barrier to bidding on a Caltrans project. Her firm has multiple certifications and she stated: "To participate in a process that only yields another certification with no potential business opportunities is not cost effective for my firm." (Written testimony submitted 04/04/07).'

Several interviewees felt that the bidding process was unfair because Caltrans awards most of the contracts to the same large firms. In hopes of getting more Caltrans work, Interviewee #22 hired a former Caltrans architect in the 1990's who he thought might help the Company achieve better success in winning Caltrans business. The owner believed that part of the reason the company was not having success winning business was because of the complexity of the Caltrans contracting process. He also said that bringing a Caltrans employee with procedural expertise in house did not make any difference in terms of the lack of success winning contracts.

Interviewee #22, an African American male-owned business, reports that he does not go to the expense of attempting to win Caltrans work because he believes there is no point in expending resources on a futile exercise. Interviewee #22 does interact with Caltrans through some of its local agency contracting. When it does so, his experience is that Caltrans is very difficult to deal with.

Interviewee #23, a Asian American male-owned business, feels that the Caltrans bidding process does not favor small or minority owned businesses. He points to the differential success in his gaining other public sector projects relative to Caltrans as evidence for this. He feels that the number one problem with the bidding process is that Caltrans does not reach out to the smaller subcontractors to help them get work. Interviewee #23 also stated that there is a “buddy-buddy” system between Caltrans project managers and the large prime contractors such that it is very hard to break in even if a smaller firm is qualified. Also, “good faith” efforts on the part of prime contractors have not benefited him in any way. Interviewee #23 believed that the outreach program was primarily oriented at finding construction firms rather than professional services firms that were DBEs.

For Interviewee #29, a Hispanic male-owned DBE business, the biggest issue is the incumbency. If the incumbents are most likely going to get the job again, then it is unfair.

As a consultant, the experience Interviewee #50, a white male-owned business, has with the Caltrans bidding process includes responding to an RFP, ten (10) firms get short-listed and then Caltrans awards contracts to firms on a rotating basis from that list. The problem is that most of the time a small firm is not even considered for Caltrans projects because of the size of the projects. He said there is the presumption in both the public and the private sector that only the big firms can handle the big projects. According to Interviewee #50, the reality is that small firms such as his company would assign the same number of engineers to each project as would the larger firm – i.e., a firm with 100 engineers does not put 100 engineers on a single project, but rather two engineers just as he would.

Interviewee #69, a white male-owned business, said in the past he did really bother to bid for Caltrans work because he knows he does not have a chance since those contracts are going to DBEs. Interviewee #69 thinks the bidding process is pretty much focused on DBEs. Interviewee #69 still, however, sometimes looks on the Caltrans' website for bidding opportunities. In the past, Interviewee #69 would get calls from primes for Caltrans work and the first question was whether he has a DBE certification. Once he told them he is not certified, that was the end of the discussion. They did not even ask him for a quote. He said that this is starting to change though, in that the primes are not asking whether he is a DBE, and thus, he is getting more work.

Interviewee #75, a white male-owned business, said that there are less than twenty (20) prime contractors that always get the Caltrans work. These are the companies that can afford to bond the work. The bonding requirements preclude small businesses from obtaining Caltrans work.

Interviewee #82, a white male-owned business, feels that Caltrans tailors their specifications so that there is really only one entity that can meet them. He has lost several contracts simply because he was not able to meet the specifications. So his main complaint with the Caltrans bidding process is that Caltrans is not open to alternative ways of accomplishing the objective. In many instances, he could provide the equipment that would do what Caltrans wanted it to do, but it did not meet the specifications so Caltrans officials wouldn't listen to him.

Interviewee #7, a white female-owned business, relayed experiences of calling around and trying to get on project teams, but only to be told by the prime that the team had already been formed. Interviewee #7 also stated that oftentimes "primes will offer you a contract that you really can't sign" because of clauses regarding liability and indemnification and the like (e.g., a contract that requires a subcontractor to keep working even though there may be a disputed change order).

CATA #10, an Asian American trade association, reports that its members do not bid but rather respond to RFPs and RFQs. He thinks this process is very exclusive because they request specific Caltrans experience or former Caltrans employees. He stated the notice procedure is pretty open and they receive notice on time. The notification send-out does not have a long lead time and it is very short to allow a small firm to team up with a large firm and put a proposal together; "it is too rushed." He stated "we believe" the larger firms know about the project ahead of time because they have more sophisticated business marketing development so that when the smaller firms receive notice and try to team up the larger firms already have their teams.

Interviewee #1, a Native American male-owned DBE/MBE business, stated that it is his perception that Caltrans' bidding process is inclusive. Interviewee #22, an African American male-owned DBE business, is critical of what he perceives as Caltrans' strong bias in favor of very large architectural firms. He repeatedly stated that until Caltrans changes its perspective about the type of architect it wants to hire, Interviewee #22 believes that company has not had success with Caltrans projects, in contrast with other public agencies, because Caltrans' has no interest in the local constituency and has a strong preference for large, internationally prominent firms over smaller local ones. Owner did not feel that the DBE program could possibly overcome the bias against smaller local businesses that Caltrans has.

Adequacy of notification.

CATA #5, a trade association representing subcontractors, does not believe its members are adequately notified of opportunities to bid with Caltrans. Subcontractors are often notified too late of contract opportunities. She suggests Caltrans to hold more forums where subcontractors could learn how to find out about opportunities and understand the process. There is more diversity in the subcontractors utilized in the public sector. She attributes this to the "lowest bidder" preference. The public entity is less concerned with quality and more concerned with price than owners in the private sector.

CATA #12, an African American trade association, described Caltrans' advertising and communication of bid opportunities as "poor" but said that they are "a lot better then they used to be." He said that even though Caltrans publishes its jobs in trade magazines, people still don't know about them. According to CATA #12, the district level is where attention needs to be focused, since if the district offices are exposing opportunities to local businesses, they will know the local businesses and local media and be in a better position to get out the word about Caltrans jobs. CATA #12 emphasized the importance of advertising and outreach efforts like the recent trade shows that Caltrans has done, which he said have been beneficial (because they give businesses opportunities they would not otherwise have and have changed the attitudes of some businesses towards Caltrans). But, he said, not all districts have done these trade shows (even though some said they would).

Interviewee #1, a Native American male-owned business, said he thinks the Caltrans website adequately notifies people of bidding opportunities and he also receives an automatic notification from the California state contract register of opportunities in his area of expertise.

Interviewee #9, a white male-owned business, said that he had "no complaints" regarding notification and advertisement of bids, and that "the process is operating fine . . ." Interviewee #9 relayed also that "its always nice to know about a project ahead of time before it becomes public . . . . [,]" and that sometimes he is able to learn about projects before they "hit the streets" so that he is able to "better prepare and position and team before that happens."

Interviewee #15, a white male-owned business, felt that RFP's clearly communicated the bid requirements with respect to DBE's and that very often, the DBE's that he works with were better informed about these requirements. Interviewee #17, a white male-owned business, thought that the Caltrans did "a good job" of advertising and giving notification of bids and RFPs.

Interviewee #26, a white male-owned business, felt that the process whereby Caltrans advertises its contracts is "real good," and that the process for finding out what primes have bid on a project is as

"clear as can be" since Caltrans makes available plan holders lists that show whether a plan holder is bidding as a prime or a sub. He did note, however, that the information available to contractors at the time of the bid "should be better," as most local governments and other government agencies provide a name and phone number for a contact or point person to call with questions, but "with Caltrans you don't know who to call." He also noted that Caltrans requires all questions to be put in writing a minimum of seven (7) days before the bid, and he felt that his requirement was hard on small businesses, who often "don't even get started on a bid" seven (7) days beforehand. Interviewee #26 also suggested that Caltrans add a category to the plan holders lists to show if a contractor bid as both a prime and a sub on a project. Other issues raised by Interviewee #26 are that Caltrans' project plans and specifications do not allow enough working days for small contractors, and that the liquidated damages provisions in Caltrans contracts are too high. Interviewee #26 recommended that Caltrans "give a little more time for work days for completion" and lower the dollar amounts in its liquidated damages provisions. He suggested also that Caltrans could extend the number of allowable working days for small businesses by an extra twenty per cen (20%), so as to "help people to be able to compete against the big guys."

In terms of notice, communication of opportunities, advertising, solicitation of bids or RFP with relation to the Caltrans projects, Interviewee #29, a Hispanic male-owned business, feels that Caltrans does an “excellent job” and adequately notifies him of opportunities.

Interviewee #32, an Asian American female-owned business, felt that she was well informed of opportunities to bid on Caltrans work and stated that she usually found out about Caltrans jobs because its solicitations are published on the Department of General Services' website. However, Interviewee #32 stated that she "usually do[es]n't go after Caltrans [jobs]" because of "the perception that Caltrans is a pretty . . . tough barrier to penetrate." She said that it is part of her business plan to go after Caltrans work because she thinks they would be "a very, very good client to work with[]" but that doing Caltrans work is "not a priority at this time" because she thinks that "it's going to take a lot more getting to know key players . . . ." than is required in order to get work with other public agencies.

Interviewee #40, a white male-owned business, stated that the company gets the same bid advertisements as all the other contractors and that it’s a fair process. Most of the information is online, but Interviewee #40 doesn't directly deal with the notices – the company has someone who prepares the bids (most of this is done online). Most of the primes involved in the various projects are easily recognized by Interviewee #40, so there is no problem knowing which primes are going to bid for a particular project. According to Interviewee #40, the only time you cannot bid for Caltrans is if you are excluded for a safety violation or if you withdrew a bid and had someone else complete the work, or if you are not qualified or licensed as far as the project specs. Interviewee #40 said the process is easier without the DBE requirements – the whole thing used to be much more complicated (DVBE process is even more complicated).

Interviewee #47, a white male-owned business, feels that Caltrans adequately notifies them of bid opportunities. Caltrans, in each district office, has monthly meetings that are open to consultants where they talk about what the district is doing and you can find out about upcoming projects at these meetings. Caltrans also lists opportunities on their website. They are on an "on-call" list. You have to submit your statement of qualifications to become a selected consultant for each of the contracts that come.

Interviewee #50, a white male-owned business, does not feel he is given adequate notice of Caltrans bidding opportunities. There have been several times that he received something in the mail regarding a bidding opportunity that had already occurred or that was scheduled for the same day. Mailings are the primary way in which he hears about Caltrans projects. He's not on the email list, although he is for the City of Los Angeles. He is contacted by developers regarding bidding opportunities. Interviewee #50 reported he feels Caltrans bidding process is inclusive of both DBEs and non-DBEs.

Interviewee #56, a white male-owned business, notes that the Caltrans bidding process is competitive, but its fair. He stated that there are always things to take advantage of in the bidding process. According to Interviewee #56, Caltrans advertises in local trade papers, but if you're bidding work, then you're going to go through your local bidding exchange. Sometimes you are notified by phone, in which case you are also usually asked if you are a minority of if you are a disadvantaged business. "In most cases all primes are advertising the same jobs to the same people – for the same purposes. It's routine . . . ."

Interviewee #49, an African American male-owned business, said that it had been two or three years since he had bid work with Caltrans but that Caltrans did a good job of advertising their work and that it was "easy to find out about those [Caltrans] jobs." He stated that he usually found out about Caltrans jobs through the green sheet (a trade industry circular/paper). He stated also that he had never been denied the opportunity to bid Caltrans work, and that he "d[id] not really have a problem with it."

Interviewee #73, a white male-owned business, feels he is given adequate notice of Caltrans bidding opportunities. His clients call him and solicit bids.

Interviewee #75, a white male-owned business, feels bids are satisfactorily communicated. He learns about them through various publications and the Caltrans' website. He feels the bidding process is pretty inclusive of both DBEs and non-DBEs. He is not aware of any efforts by Caltrans to streamline the bidding process, but does not feel there is in fact any way to do so. As a subcontractor, he contacts primes regarding bidding opportunities and primes also contact him. He feels Caltrans bidding process could be improved if more projects did not require bonding and that this would permit more small businesses to participate.

Interviewee #76, a white male-owned business, finds the Caltrans bidding process to be satisfactory. Caltrans does a good job of advertising bidding opportunities through Caltrans' website, Greensheet and e-bid board. He believes he is aware of 99% of Caltrans bidding opportunities, and that notice of bidding opportunities is inclusive of both DBEs and non-DBEs. He usually contacts primes regarding bids, although he does have 3-4 primes that contact him on a regular basis for bids. Interviewee #76 reports that his one complaint is that Caltrans sometimes has too many bidding opportunities scheduled for a single day.

Interviewee #82, a white male-owned business, feels he is given adequate notice of Caltrans bidding opportunities. He believes the bidding opportunities are inclusive of both DBEs and non-DBEs and notes that it seems like he was always being asked if he was qualified as a DBE. Interviewee #82 reports that when he was active, primes asked him to submit price quotes more than half of the time.

According to CATA #2, an African American trade association, Caltrans jobs were better advertised in the pre-computer era, when there was more faxing and advertising in trade papers and community and 'ethnic' newspapers. He noted that a lot of African American small businesses still do not have readily available computer access and/or savviness. CATA #2 said that Caltrans does a good job of advertising in Oakland and the Bay Area because the community there demands it, and that if Caltrans replicated these efforts and practices in other areas, things would be okay. CATA #2 also said that the Caltrans bidding process needs to be more accessible. He recommended that Caltrans put more plan rooms in the inner city and/or where DBE firms tend to be located, and that Caltrans engage in more networking with trade groups on a local basis, in order to help firms get certified (because, he said, many African American owned businesses see no need to do so in the post-209 era) and to let firms know what the agency is doing.

According to CATA #3, a Hispanic engineering trade association, Caltrans does not adequately advertise and communicate its work opportunities. He said that Caltrans does most of its advertising on the web, and that though large firms have marketing departments and/or inside information on jobs, small businesses do not have the time, staff, and/or resources to be on the internet all the time searching for jobs. He also said that he had suggested to Caltrans that the agency needs to provide notification (via mail, fax, and/or electronic means) of jobs to whoever wants to be notified and registers with Caltrans for this purpose.

CATA #3 stated that other agencies (including the Metropolitan Transit Authority) provide firms with 6-month look-aheads of their upcoming jobs, but said that because a lot of times teams are already formed by the time Caltrans puts out requests for proposals (RFPs), small businesses usually wind up trying to get on project teams to work as subcontractors. This, said CATA #3, is why it is so important for small businesses and DBE firms to get a first chance to work with prime contractors, so that they can demonstrate their qualifications to the prime and get a working relationship going.

CATA #6, a trade association representing heavy engineering contractors, reported that members are adequately notified. They can check the Caltrans website. EUCA also provides notices of upcoming Caltrans projects. They receive a list from Caltrans including all different projects. There are several factors that affect the bidding process. First, bureaucracy. "Any kind of additional red tape … makes the bid price go up, good faith effort is one of them, meeting certain … Storm Water Pollution Prevention Program requirements is another one." "If they know who the resident engineering is for the project that their bidding on the bid price will go up and down depending on who they think that person is going to be." If they think they will be treated fairly, the bid price will go down. Other aspects that affect the price: location, their ability to get materials for nearby sources, whether or not they feel comfortable with the work, whether they think the project was designed well, whether they think material prices will increase. If a project isn't designed well, a lot of time the primes will submit a bid inquiry. A lot of times Caltrans will say "bid it as you see it." This means according to CATA #6, they either feel the bid documents are clear or they know they screwed up and they need to fix it. When Caltrans responds to a bid inquiry the question and answer is posted on the Caltrans website for everyone to read.

CATA #7, a Filipino trade association, reports that Caltrans does a good job about getting the word out about bidding opportunities. Some districts are more aggressive than others in encouraging DBE participation. Primes send DBEs faxes notifying them of opportunities in order to comply with their good faith efforts. In his opinion, these are not genuine requests. He knows of a member who's bid

was used and the prime won the job but never called him. The member did not follow up. He chose to move on and pursue work in the private sector.

Interviewee #7, a white female-owned business, felt that Caltrans work was "well advertised" and that there was adequate notification of bid opportunities. She did indicate, however, that the Caltrans bidding process perhaps placed too much emphasis on companies' size when deciding to whom it should award contracts, and Interviewee #7 noted that Caltrans uses a different computer system for its CAD than the system the company uses for its non-Caltrans work.

CATA #9, an association of consulting, engineering, and land surveying firms, said that Caltrans provides notice of RFQ opportunities on the website and the notifications are officially posted two (2) to three (3) weeks from the submittal date. There is also a pre-announcement – "contract look-ahead" – "but that typically that isn't very accurate." He said approximately one-fourth of the contract look-ahead notices have been posted for six (6) months that they would be coming out, but they haven't come out; others are only posted for one (1) week before the actual posting comes out.

CATA #9 reports that "some of the issues with it are: . . . if you are a subconsultant, you have no idea who the primes are unless you figure it out on your own. There's no bidder's list that tells you who's a prime and who's a sub and who's actually going to submit on it. So it makes teaming very difficult. And they're on call contracts so the qualifications required are very vague and fairly generic." They may have specific contract lists but they will not have specific roles under this contract and this makes it hard to go after it unless you are able to cover every possible task that may come up under the contract. Once the SOQs are submitted, there is about a week or two turnaround time for the short-listing. Unless you are on the team that is short-listed, you will not know that, and will only hear once the contract is awarded to someone else. That is another problem.

CATA #9 does not think that the process adequately notifies businesses of opportunities with Caltrans. There contract look-ahead needs to be more accurate, which Caltrans is able to do because they have all of the information available to them. "I really think they need to have some sort of pre-submittal meeting so the subconsultants – the DBEs, SBEs, DVBEs, all those type of firms – can see who the potential primes are, meet them, and get a chance to sell themselves to those primes." He stated there is no other way to find out which prime contractors have expressed interest in an RFQ. A lot of times, based on the contract look-ahead, the prime contractors will already have their teams all set. Nevertheless, CATA #9 has no knowledge of his members ever being denied the opportunity to respond to an RFQ.

Interviewee #13, a Pakistani male-owned DBE firm, did not think that there were any problems with learning from Caltrans or others what projects are available for bidding. He felt that bid opportunities were well advertised and easy to find. Interviewee #13 stated: "I'm pretty aware of when the project's coming out, I'm pretty aware when I fax [a bid submission], and I'm pretty aware when I lost it." Interviewee #13 stated also that generally, by the time he finds out about a project, "it's too late" to try to team up with the primes who are bidding the project because they have already formed their teams. He likened the Caltrans bidding process to that for contracts in Iraq that are awarded to Haliburton even though they are technically open for others to bid on. Interviewee #13 did not specifically experience where he was denied the opportunity to bid or submit a price quote on a Caltrans project.

Interviewee #60, an Asian American male-owned business, has not submitted any bids for Caltrans work, but he has created a list of the work that they have emailed him, and he wants to try to bid for some of the projects. Interviewee #60 notes that the projects he receives communications about are very large, so he tries to team up with companies as a subcontractor, but he is often turned down because teams have DBE subcontractors already. Interviewee #60 stated that he knows the Caltrans process, and that he is going to begin submitting his own bids for the work. Interviewee #60 said he always sees the same faces, and there is no one new that is being used. Although Interviewee #60 notes that there is no way to know what primes have expressed an interest in a particular RFP, he stated that this would be helpful. As of right now, he does not know where to go, so he just starts calling people – both for Caltrans and for non-Caltrans public sector work. Interviewee #60 stated that the Caltrans bidding process is good, but he recommends that smaller and newer subcontractorss have priority for the teams that are being put together. Smaller DBEs lack the financial resources to make it on their own, and he stated that prime contractors need companies like him anyway; he wants to be given the chance to "submit the introduction." There needs to be "equal opportunity to all the little compan[ies] to grow to survive and grow."

Interviewee #62, a white male-owned business, reported that he is adequately notified of opportunities to bid with Caltrans.

Interviewee #85, a white male-owned business, does not believe he is adequately notified of projects for Caltrans. He needs to know about projects before they are awarded so he can go to the prime and offer his supplies. They had hoped that certification as an SBE would have led to more notification of projects. They got a call from a prime in Berkley for a Caltrans project even though the prime knew they would not be able to service the job from Sacramento. The job said you had to have a small business bid on your work and that is why the prime called. "He knew we couldn't supply it … .he wanted to hire his good ole' boys but in order to get the job he had so solicit a couple small businesses." This has happened before where companies call them where there is no way they could deliver that far. They have not received a call like this for a Caltrans project in Sacramento. He believe one of the incentives for using SBEs or DBEs is that the prime gets a premium. He thinks Caltrans should give these primes lists of SBEs and DBEs and tell them about this program.

CATA #4, an Asian American trade association, feels that firms are adequately notified of opportunities to bid with Caltrans and noted that Caltrans projects are posted on the Caltrans website. Nonetheless, CATA #4 feels that Caltrans is more communicative with the larger firms and their trade associations, such as CELSOC (which CATA #4 describes as nine per cent (90%) white).

A women owned DBE stated, "The biggest difficulty is that we do not consistently have visibility into opportunities to bid. We are on the CCR SOS distribution and I rarely, if ever see bid opp[ortunities] for this area." (Written testimony submitted 3/14/07).

Methods of Notification of Bid Opportunities

Interviewees reported various ways by which they receive notification of Caltrans opportunities. Interviewee #1, a Native American male-owned business, stated he looks "all the time" to see what projects are listed on the California state contract register. He said the Caltrans contracts are advertised state-wide but he "never" wins those because they are awarded to the lowest bidder in the state. He stated that he bids on some projects but he does not bid on Caltrans projects.

Interviewee #2, an African American male-owned business, stated that in the past, he had received mailings from Caltrans with respect to bidding opportunities but that he had ceased to receive these. Owner stated that he found these mailings helpful. He does not utilize, nor did he seem to be aware of, the Caltrans website. Almost all of his work comes from primes approaching him to do work on projects rather than his submitting bids to primes working on either public or private projects.

Interviewee #8, a Hispanic male-owned business, said that the company finds out about jobs through the green papers and other "publications and other things that [they] pay for." He felt that the system by which subcontractors can find out what prime contractors have expressed interest in a job so that the subs can seek out the primes to bid "works pretty good."

Interviewee #10, an African American male-owned business, stated that Caltrans bids were generally well-advertised and that his company receives invitations in the mail and faxes, and that he sometimes finds out about jobs by looking in the paper. Interviewee #10 also stated that Caltrans sends out lists of all the prime contractors bidding on a particular contract, and that he can find out this way which primes are interested in particular contracts.

Interviewee #27, an African American male-owned firm, felt that Caltrans did an adequate job of notifying business of and advertising its bids. Interviewee #27 stated that the company receives notification of and solicitation for bids through its website and through a builders' association of which he is a member, and that prime contractors send paper quotes.

Interviewee #31, an African American female-owned business, said because Caltrans does not put out RFPs that specifically identify dry utilities as the primary focus, the company's experience with Caltrans' bidding process is as a subcontractor. He noted that prime contractors are supposed to pursue utilizing DBE firms on these contracts but stated that this "very seldom happens." Regarding the advertising of Caltrans jobs, Interviewee #31 stated that in the past Caltrans would send out notices of projects to WBE firms and DBE firms but that Caltrans "stopped that long ago." He said that the company has a process for going after public sector projects and for researching RFPs and requesting a planholders' list so that they can identify the primes who are bidding on a project. However, said Interviewee #31, after the company contacts these primes and explains and offers its services, "[s]ome accept, [but] most do not." He attributed this situation to "Caltrans' lack of any type of enforcement of utilization, not only of the type of work [the company does] . . . but also for using M/WBEs."

Most of the solicitations Interviewee #35, a female-owned business, receives come from professional contacts. They find out about Caltrans projects when the primes notify them by requesting a bid. They also receive notices through an email subscription that tells them about public sector jobs. They also search websites of various public entities. They rely more on the primes to contact them than finding work.

Interviewee #39, a Hispanic male-owned business, stated that before the DBE program was suspended, the company would often find out about jobs when prime contractors contacted them asking for bids. Now, however, since the frequency with which they were contacted by primes has gone down, Interviewee #39 said that "[t]here's more of us looking to try and find the jobs as opposed to the other way around." He said that the company often uses the Green Sheet, where Caltrans jobs are usually advertised, and also "tr[ies] to contact people [they] think are bidding." The

company also uses the Green Sheet to try to figure out what prime contractors are or will be bidding on a particular job.

Interviewee #45, a white male-owned business, stated they go to the internet every Monday morning and check the new plans and specs that are available. He stated this information used to be in the paper but the paper is an "ancient type affair." He stated they have improved the process and they will have the plans and specs two days after ordering them. He stated that the system is open to anyone that wants to understand the system but you have to understand the system and know where to go. He stated he has been living the process for twenty-one (21) years and if they (Caltrans) makes a change they just adjust. He stated the process adequately notifies sub-contractors but "there are only a few subcontractors that play in the game." One problem Caltrans will have forthcoming is that "the [subs] are anticipating all this work to come out which still hasn't come out and the subs will stop bidding when they get a full plate."

Interviewee #45 further stated that Caltrans does a lot of outreach. He stated that bidding information is also advertised in the green sheet that tells you all the facts and details. Interviewee #45 stated that after his business gets the plans and specs they will list themselves in the paper [the green sheet] and say they are bidding on a contract and need subcontractors. He stated they pay $5000 per year to advertise in the green sheet.

Interviewee #46, an Asian American male-owned business, reported that the company generally finds out about Caltrans jobs upon being contacted by prime contractors asking them to bid. Usually, Interviewee #46 said, the company does not receive anything directly from Caltrans notifying them about Caltrans jobs. The company does subscribe to various industry publications that let firms know about Caltrans jobs, and Interviewee #46 said that when the company sees a job for which it wants to bid, it calls to the prime contractors whom it knows and with whom it has worked to see about teaming up with them.

Interviewee #51, a Hispanic male-owned business, stated that the advertising for Caltrans work is now "a lot different than it was several years back." He said that advertising used to be done primarily in the green sheet (the daily construction magazine or trade industry paper) but that now firms go online to "get pretty much the advertising of all agencies." Interviewee #51 did not know if Caltrans sends out advertisements and/or flyers to contractors that continuously bid Caltrans work, but he said that his company has to search for Caltrans jobs and that it has employees whose job it is to search out work opportunities with Caltrans and other public agencies. When the company sees a job for which it is qualified to bid, the company "pull[s] the plans and then send[s] a sub bid out to the primes." Interviewee #51 said that the company finds out what primes are bidding on a project by looking at the planholders list and through suppliers who notify them of jobs (and who know of the jobs because they themselves are looking around for contracts on which they can supply their materials). Interviewee #52, a white male-owned business, said that he knew that the work was on the internet and how to get to it – and that he could find it were he looking for it.

Interviewee #59, an African American male-owned business, subscribes to a RFP service by phone, so he gets advance notification of bids, and he also used to do work with a big firm. He has general knowledge of what primes express interest in a particular proposal because he has a good relationship with some of the firms in the construction side of the business. Interviewee #59 thinks that the way in which Caltrans' project files are distributed is not user friendly – he would like to see the project documents in an easy format to download online. The drawings that he needs to complete bids are

often in smaller, individuals files that make it more difficult for small firms to use. Interviewee #59 also wants Caltrans to carve out more work for smaller businesses, and thinks the DBE program is useful and that Caltrans needs to continue the program. Interviewee #59 thinks the fact he is not receiving invitations to bid anymore pretty much shows that the DBE program was working.

Interviewee #61, a Asian American male-owned business, notes that the Caltrans bidding process is self-explanatory, easy, inclusive, and Caltrans makes it known that there are opportunities available by postcard or on the Caltrans website. Interviewee #61 notes that there is no way to know what primes have expressed an interest in a particular RFP until the pre-proposal meetings. Interviewee #61 notes that even then it's not definite whether primes are going to bid or not, so her company contacts each and every possible prime to market its services. According to Interviewee #61, receiving a list would alleviate this hassle. Interviewee #61 feels the company has been denied the opportunity to bid for Caltrans work because Caltrans has already picked different primes or groups. Interviewee #61 does not make this observation about other work, recommends providing a list of primes that are submitting for each project.

Interviewee #67, a white female-owned business, stated that Caltrans did not notify her company about its jobs and that she did not know why they do not do so. According to Interviewee #67, the company receives on a weekly basis notices from the Metropolitan Water District (MWD) and through a "Network" system existing for work at the Los Angeles airport and in the Los Angeles and San Diego areas. She said that the company is frequently contacted by prime contractors asking for bids on MWD contracts but that, though it receives notices from Caltrans about meetings for DBE firms, the company receives no requests from primes requesting bids on Caltrans work. Interviewee #67 said that though she had not been denied the opportunity to bid work with Caltrans, she had maybe been denied access.

Interviewee #68, a white male-owned business, said that the company, when it bids on Caltrans work, bids as a subcontractor to engineering firms. He said that he had never been made aware of any job opportunities by Caltrans, but instead had always learned of Caltrans jobs through other people. Interviewee #68 also said that the company gets most of its business by word of mouth, and that most primes for whom the company subcontracts already know him and want to work with his firm. Interviewee #68 did not know of a way to find out what primes had expressed interest in a particular project so that he could then contact and submit a bid to them, and he stated that he had never experienced being denied the opportunity to bid Caltrans work. Interviewee #68 recommended that Caltrans could improve its bidding process by making it more obvious that projects are coming up and by providing a way for firms to sign up on an RFP list.

Interviewee #81, a Hispanic male-owned business, reports that he finds out about Caltrans bidding opportunities through primes contacting him requesting a bid. He never contacts primes regarding bidding opportunities. He said there has been many instances in which he has been called by prime contractors asking for a bid, but he knows it's just to satisfy their good-faith efforts to utilize a DBE. When he first started his business, he would take the time to respond to these calls and actually submit a bid. However, several times after submitting a bid he would call to check the status, and he was told that they had everything covered. That happened so often that he stopped responding to random primes asking him for a bid. These primes just wanted him to submit a bid so they could tell Caltrans that they made an effort. Interviewee #81 feels that the so-called "good-faith efforts" are a sham.

CATA #1, an Asian trade association, said that Caltrans has a good system for advertising on its website, but that some smaller DBE firms do not have the time and/or experience to go on the internet. Thus, Caltrans' going paperless has caused problems for firms that are not as internet-savvy as others. He said that his Association had raised this issue with Caltrans. CATA #1 stated that Caltrans used to advertise its jobs via facsimile through a "blast fax" system, and he suggested that Caltrans implement an "e-blast" system to alert certified DBEs of jobs, bids, etc., and to provide links the same.

Interviewee #13, a Pakistani male-owned business, stated that his business "regularly" gets faxes from prime contractors asking his company to show interest in being part of project teams where there is a DBE requirement, but that his firm "seldom become[s] part of the team." Interviewee #13 stated further that it was his observation that big prime contractors send faxes and emails to the firms on the Caltrans DBE list because they are supposed to, but that these primes already have established DBE firms in their network that they plan to use for the project anyway. As a result, according to Interviewee #13, the businesses who received DBE certification before his firm did "virtually have no leg work to do" because the big prime contractors are going to use them anyway.

Interviewee #41, a white male-owned business, reported that they hear of a lot of public sector projects through word of mouth. Audits and on-site visits weigh heavily on whether environmental testing facilities receive the work.

Interviewee #58, a white female-owned business, recently submitted a Caltrans proposal, and indicated that they receive a number of email notifications and receive hard copies of project notifications. They have also attempted to get on teams for Caltrans work, and their recent attempt was for a subcontractor position for a Northern California project. Interviewee #58 indicates she was adequately notified of the opportunities. Interviewee #58 also notes that she received a list of primes that expressed an interest in the particular RFP for which the company submitted a bid, and that they had to request that information. The company was able to take that information and then contact the individual primes to see if they wanted Interviewee #58's company on their bid teams. Interviewee #58 reported that Caltrans holds pre-proposal and pre-bid meetings so that you can meet people and generally put your name on lists to show that you are interested. Sometimes companies will contact Interviewee #58's firm off of a bid list because of the company's status as certified firm.

Interviewee #24, a white female-owned firm, lives in a small northern California town and would like Caltrans to post notices at the local post office and in the local paper. She generally learns about jobs by word of mouth. She has never visited the website.

Knowledge of primes interest in bid.

Interviewee #1, a Native American male-owned business, stated that he would "like to figure out" how to connect with a prime contractor before they submit a bid because working as a subcontractor is an area in which he can grow. He stated that the prime contractors appear to already have their team in line before they submit a bid; this is an area that he would like to work on.

Interviewee #9, a white female-owned business, stated that there are no problems finding out about what primes have expressed an interest in a particular RFP, since there are usually plan-holders and pre-proposal meetings (for which subcontractors can get the sign-in sheets).

Interviewee #27, an African American male-owned business, also indicated that he did not have any problems finding out what prime contractors were bidding on Caltrans jobs, since "they ship [him] quotes and [the company] pretty well know[s] what's going on."

Interviewee #32, an Asian American female-owned business, did not know if there was a way to know what primes had expressed interest in a particular RFP so that subs could contact those primes about submitting price quotes.

Interviewee #33, a Hispanic female-owned business, felt that there is adequate notification and advertisement of Caltrans' projects. She stated that she usually finds out about Caltrans jobs through subscriptions services that the company uses to find RFPs. She felt that Caltrans could do a better job of providing a way for subcontractors to know what primes have expressed interest in particular projects because, according to her, "a lot of times [she] do[es]n't know who's out there . . . and before you know, the team's already selected."

Interviewee #34, a white male-owned business, said that it was hard for him to address questions regarding Caltrans' bidding process, since the company has "a number of people" in its business development staff whose "whole job . . . is to keep abreast of those types of opportunities." He did note that he usually knows about RFPs "right away," sometimes by virtue of fellow consultants or persons at various government entities with whom he interacts, and said that sometimes he "hear[s] rumors about RFPs even before they come out."

Interviewee #57, an Asian American male-owned business, is not often involved in the bidding process. While Interviewee #57 stated that he has adequate notice of opportunities with Caltrans, mostly the primes from the teams submitting actually make the bids public. According to Interviewee #57, there is no way to know what primes express interest in a particular RFP. Interviewee #57 recommends that it would be good if DBEs could actually express a direct interest to Caltrans, and then Caltrans could make that list public; that way, at least primes would know which subcontractors (DBEs) were available for particular projects.

CATA #3, a Hispanic trade association, reported that the only way to find out what primes were going to be bidding on a particular job was to do cold calling and marketing, and that this was done only after a contract was made public (which may be after some prime contractors have already found out about the project and formed their teams). Thus, he said, it all comes down to knowing and having good working relationships with the prime contractors who get Caltrans work. But, according to CATA #3, some of the larger prime contractors cut back on their outreach staff after Proposition 209 passed. He said that in the 1990s (before 209 passed) Caltrans used to do pre-bid meetings that worked well but that companies are now less prone to do outreach to DBE firms because they see no need to do so. In a recent meeting said CATA #3, he was told by someone from a big firm that that firm was hesitant to help small businesses get work because these are, after all, the big firm's competitors. Another issue identified by CATA #3 is that corporations are less attuned to community needs than they were 10 or 20 years ago because now they are focused more on profits.

Interviewee #7, a white female-owned business, indicated that the bidding for Caltrans contracts has become more competitive over the last fifteen (15) years. Interviewee #7 also indicated that it is difficult to find out what primes have expressed interest in a particular job. Though an engineering firm can sign up for plans on the Caltrans website, there is, according to Interviewee #7, no way to

find out what primes have downloaded a particular solicitation. Instead, said Interviewee #7, “you have to randomly call based on your best guess of who is going after [a particular job]."

Denials of bids/price quote submission opportunities.

Most interviewees stated that they had never been denied the opportunity to submit a bid or price quote. According to Interviewee #8, a Hispanic male-owned firm, the only time that he was denied the opportunity to bid on a Caltrans job was when his firm was not awarded a job because a DVBE subcontractor whose bid the firm used was not actually certified by Caltrans to do the work items for which it bid.

Interviewee #26, a white male-owned business, stated that the only times that he has been denied the opportunity to submit a bid on Caltrans work have been situations where the requirements for bonding were too high, or where he felt that the liquidated damages provisions were excessive.

Interviewee #31, an African American female-owned firm, indicated that he had never experienced being denied the opportunity to submit a price quote for Caltrans work because, he said, "[t]hey normally don't go that far[,]" since "if you are not selected to be on a team, and the team is not selected, then you will not get to the point where you can provide a fee proposal."

Interviewee #33, a Hispanic female-owned business, stated that she had never been denied the opportunity to submit a price quote for Caltrans work. She did relay an experience back in 2005 where she felt a Caltrans auditor unfairly and improperly calculated her hourly rate, and she suggested that Caltrans could improve its bidding process by accounting for the fact that firms bidding on Caltrans work sometimes need to give their employees raises.

Interviewee #39, a Hispanic male-owned business, felt that the company had been denied the opportunity to bid "a couple of times" by a local city that had suspended its DBE requirement, and he said that he would "like to see the DBE [program] put back in place" and that it "would sure[ly] be helpful" if this were done. He suggested that Caltrans should continue to advertise its jobs in the Green Sheet and also suggested that Caltrans could improve its bidding process by providing companies with email notifications (e.g., through a listserv) of available and upcoming jobs.

Interviewee #45, a white male-owned business, stated he has never been denied the opportunity to bid with Caltrans although some of the agencies demand mandatory pre-bids and if you didn’t know about a job and pre-bid then you can't bid. As far as recommendations, he stated he understands from a meeting in Sacramento that Caltrans is going to eliminate paper bids and he is against that and thinks they should bid "the old long hand way."

Interviewee #58, a white female-owned business, notes that the company has been denied the opportunity to bid on both private and public projects, but stated that experience is not specific to Caltrans. The company has attempted to be added to Caltrans teams, but sometimes Interviewee #58 is denied the opportunity.

Recommendations related to the bid process.

Several interviewees offered recommendations related to the bidding process. Interviewee #1, a Native American male-owned firm, stated he would really like to know which prime contractors are bidding on a particular project. "I think it would be great if they would list the people who asked for

a bid package. . . . [T]hat would give me an opportunity to contact them and offer to work with them as a subcontractor."

Interviewee #2, an African American male-owned business, stated that he felt "unequivocally" that the biggest problem with securing Caltrans work was that the agency failed to segment projects, or to force prime contractors to segment projects, into small enough pieces for small and minority owned businesses to compete for them. In the owner's view, "you have to crawl before you walk" and so it was unreasonable for Caltrans to expect a qualifying DBE or MBE to be able to handle the scale of projects that are offered. Greater segmentation of projects, along with more rapid payment, were the Owner's greatest criticisms of the Caltrans process and the major reasons why he did not do more work for the agency.

Interviewee #5, a white female-owned firm, stated that Caltrans' plan specifications are poor and contain a lot of errors. He recommended that Caltrans put cross-sections in the original plans. Interviewee #5 noted that Caltrans has automatic start dates and suggested that Caltrans start using flexible dates (so as to account for permitting, material shortages, and other things). Interviewee #5 also stated that Caltrans' specifications are "not in tune with the real market," meaning that contractors cannot build projects like Caltrans says they should. Interviewee #5 suggested that Caltrans should get its engineers to estimate their costs like contractors do, because the Caltrans engineers use outdated numbers.

Interviewee #8, a Hispanic male-owned business, suggested that Caltrans could improve its bidding process by making it easier to navigate through and find out about jobs and posted opportunities on its website, and by making its jobs "more attainable for smaller companies."

Interviewee #17, a white male-owned business, felt that Caltrans bidding process needs to be streamlined (because it is too laborious) and that the problem with the Caltrans bidding process lies with who picks the winning bid and how it is chosen. He stated that Caltrans should not award contracts based only on price but should also consider the level of skill, expertise, etc. offered. He stated, however, that perhaps his company cannot get work for Caltrans because Caltrans "hadn't used us before and they don't want to try us, or something . . . . [,]" and that "there's no way for a new firm or even an old firm like ours . . . to get in unless you keep spending and keep spending and eventually get in." According to Interviewee #17, "[t]here's got to be a better way. There's got to be some diversity in giving the same guy the same work every time over and over and over again. That to me just says that there's some kind of backroom deal going on to me."

Asked what recommendations he could offer for Caltrans to improve its bidding process, Interviewee #31, an African American female-owned business, responded that "[i]f [Caltrans] are not telling their primes that they need to utilize WMBEs and they are serious about it, it is not going to happen." Interviewee #31 said that, in addition, Caltrans "ought to be clear about enforcing who does the work on the different projects[,]" so that the available work is matched with firms that can do it. Interviewee #31 told the story of a Caltrans project for which his company bid in 2002 and for which there was a DBE goal of 17% that went unmet. According to Interviewee #31, the work that his company normally would do was not listed, thus allowing the prime contractor to ignore the company – both as a specialty firm and a DBE firm – and submit its own firm as doing all the work.

Interviewee #32, an Asian American female-owned business, suggested that Caltrans could improve its bidding process by doing small business outreach and other such symposia to open up and provide opportunities to new businesses, including DBEs and women-owned firms.

Interviewee #34, a white male-owned business, suggested that Caltrans could improve its bidding process by doing a better job of estimating costs. According to Interviewee #34, this issue is something that he has discussed with Caltrans' employees and something that they acknowledge is a problem, and the people at Caltrans who evaluate the bids of consultants are not trained on how to do so.

Interviewee #46, an Asian American male-owned business, felt that Caltrans' drawings are "usually good and self-explanatory" and that Caltrans had always been "more than fair." He did recommend, however, that Caltrans switch back to its old practice and quit using the metric system. With respect to Caltrans bidding, Interviewee #46 stated "the bidding process is not their problem. Inspection and finishing is their problem."

Interviewee #50, a white male-owned business, thinks the bidding process should be returned to the way in which it used to be run; to wit, where the winning bid was chosen based on qualifications, rather than cost-driven. The lowest cost is not always the right person for the job.

Interviewee #51, a Hispanic male-owned business, recommends for improving Caltrans' bidding process was for Caltrans to do a better job of outreach. Interviewee #51 said that "all agencies that are tax dollar dependent – whether they are small cities, the counties, the state of California – need to do a better outreach program than they are doing to disadvantaged businesses or minority-owned businesses . . . particularly those that are breaking into the construction industry . . . and let them know they are welcome to participate. He said that "primes are not meeting the [DBE] requirements because there are not enough businesses out there, DBEs that may know or be informed about the project or even have the desire to try to want to bid something like that because they may not necessarily have the experience of bidding the work but know how to do the work." He also said that a good outreach program is something "that all the agencies are lacking."

Interviewee #56, a white male-owned business, thinks that Caltrans should use a small business classification to determine preferences given by the State. He also thinks that there should be a local preference where jobs are being performed and where tax dollars are being spent. Interviewee #56 has not received local jobs that he thinks he should have received, but for DBE preferences.

Interviewee #81, a Hispanic male-owned business, recommends for improving the bidding process that Caltrans address the "fake" good-faith efforts. Also, Caltrans needs to find ways to open up the bidding opportunities to others beyond the big companies. Interviewee #81 feels that DBE utilization should be mandatory, not the subject of “goals.” Otherwise, the entire DBE program simply wastes everyone’s time because it’s so easy to falsify your good-faith efforts. There are DBEs out there that, if they were included in bidding opportunities, would make the process more competitive and even increase the quality of work. He knows of a non-DBE company that utilized a DBE for the purpose of meeting Caltrans’ requirements, and it ended up having a great experience with this DBE. Interviewee #81 feels that the DBE program is an important part of Caltrans because DBEs are smaller companies and thus less well-known. Given that they are less well-known, they have fewer opportunities to prove the quality of their work. Without the DBE program, it’s too hard for small

businesses to infiltrate the industry's inner circle of companies that partner up with each other every time.

CATA #3, a Hispanic trade association, said that Caltrans should help small firms with the bidding process and suggested that Caltrans offer workshops on how to do business with Caltrans where small business owners and representatives can meet the persons at Caltrans who will be reviewing their bids and learn more about how the process works. He said that he did not remember him or anyone else ever bringing this idea to Caltrans, but that he has not been as active as he used to be, as he did more advocacy work when his company had a bigger staff but now focuses more on his business.

CATA #3 recommended that, in addition to doing better outreach and advertising, Caltrans could improve its bidding process by sponsoring quarterly mixers where representatives from large contractors and small businesses were given a look-ahead at the Caltrans work coming through the pipeline. He also said that Caltrans needs to sensitize its reviewers to the various issues facing DBE firms and small businesses and recommended that Caltrans set up a committee of small business and DBE representatives to review Caltrans' RFPs and identify barriers, so that that Caltrans can try to eliminate and/or alleviate these barriers.

As for how Caltrans could improve its bidding process, Interviewee #7, a white female-owned business, suggested that Caltrans could set up an on-call list and then rotate the awarding of projects based on this list and how well different firms perform on their jobs. Interviewee #7 relayed an experience of Caltrans taking back (to do in-house) drafting work that it had contracted out to their firm and suggested that Caltrans could be more consistent in what work is does and does not contract out.

As for how Caltrans could improve its bidding process, Interviewee #13, a Pakistani male-owned business, suggested that Caltrans implement some kind of requirement so that prime contractors have to rotate the DBEs that they use – i.e., a system under which prime contractors cannot use the same DBEs over and over again on every project. He suggested a process whereby Caltrans would contact DBE firms directly and ask them if they were getting any work.

With respect to the Caltrans' bidding process, Interviewee #18, a Native American male-owned business, feels that it is unfair that when the company bids on a project as a general contractor, it can't use its own participation to meet the DBE goal. As a general contractor, Interviewee #18 has more control over payment, dispute resolution, and everything else that goes on. Being a subcontractor adds another layer of requirements because the general contractor has its own contract with Caltrans, which is imposed on top of Caltrans' requirements. Sometimes, there is exculpatory verbiage used to benefit the general contractor and it does not have to do with the performance of the work. Interviewee #18 feels that by not allowing the company to use its own participation to meet the DBE goal, it is forcing all DBEs to be subcontractors. Interviewee #18 explains that there are times when he gets contracts where he is not permitted to see the contracts before he bids the job. Interviewee #18 refuses to sign these contracts, and notes that he has lost jobs and been replaced because the terms and conditions are more stringent in the subcontract than if he were to work directly for Caltrans.

Interviewee #18 has experienced a "dramatic" difference after May 2006 when the DBE goal became more of an effort. He explains that there is an overall state goal which is not published on each project. Since this change, the company has been getting "almost nothing" in terms of requests to bid

from general contractors. He currently gets about 2-3 requests a week, whereas before May 2006, he would receive 6-7 in a week. The company's last Caltrans project was in 2006. Additionally, Interviewee #18 used to get calls from Caltrans' administrative branch for the DBE requirements verifying the general contractor's efforts to use minority contractors, for example, by inquiring whether a certain contractor had sent him a request and whether they had asked him to bid on a project. He has not received any calls recently.

CATA #10, an Asian American trade association, thinks Caltrans should return to the race-conscious goal and increase the goal. He would also like them to have a pre-proposal conference and to relax their criteria requiring Caltrans prior experience (similar experience should be enough).

CATA #11, a minority trade association, reported that he would like Caltrans to send his trade association notices of bids. Other public entities do a better job of notifying his organization. He would like Caltrans to have a "more hands on approach" as far as "assigning a person to talk to the smaller contractors when the smaller work comes." "Once the smaller contractors start doing work with Caltrans and they know how the system works … it would go better." There is just a general lack of knowledge of how to pursue Caltrans work. Even though he is the president of the association he doesn't even know how to find out about Caltrans jobs.

Interviewee #38, an Afghan male-owned business, stated that the biggest barrier to his getting more Caltrans work was information. Finding out where work was available was the major barrier to getting more business. He had no effective way other than word of mouth for investigating new jobs.

Interviewee #54, a Hispanic male-owned business, identified as the principal barriers to getting work with Caltrans were that Caltrans "doesn't bother to notify small contractors [of its jobs]" and "doesn't care about small contractors." In this respect, "public agencies are all the same.. if you know somebody, you're somebody. If you don't know anybody, you're nobody."

Interviewee #57, an Asian American male-owned business, stated that it is difficult to pursue work as a small company with Caltrans. He notes that on most of the public projects, people have been working on proposals for many months before they become public and the subcontractors have opportunities to prepare statements of qualifications and proposal – there is not enough time and the teams are already set.

Interviewee #67, a white female-owned business, has found it difficult to access Caltrans work because she has never worked on a Caltrans job. She feels Caltrans is the only agency that does not have an outreach program.

CATA #2, an African American trade association, who reported that none of his members have experienced barriers related to race, indicated that the biggest barrier is knowing the process and how to use it. In the public sector, prime contractors somehow seem to have access to inside information that others do not and know about jobs before they are advertised and/or others learn about them.

Experiencing Working with Caltrans

Most of the interviewees had at least one experience working with Caltrans in the last five (5) years.

Caltrans officials and staff.

Many of the interviewees indicated positive experiences and interactions with Caltrans personnel. Interviewee #1, a Native American male-owned business, noted that he has had a good experience working with Caltrans staff; he thought "people were professional and nice." Interviewee #17, a white male-owned business, stated that he has had "pretty good" experiences with Caltrans staff. Interviewee #27, an African American male-owned business, described the people with whom he dealt at Caltrans as "very friendly" and "good people." Of Caltrans staff, Interviewee #35, a white female-owned business, said "[a]ll been positive." Interviewee #19, a Hispanic male-owned business, stated that in the few times she has dealt with them, they have been "decent" and "easy to work with."

Interviewee #39, a Hispanic male-owned business, felt that the company generally had positive experiences with Caltrans officials and staff. Interviewee #39 said that most of the engineers with whom the firm had been dealing are persons of color and that "they seemed to be paying attention and non-discriminatory." Interviewee #16, a white male-owned business, similarly noted that Caltrans officials and staff are "usually easy to get a hold of" and "helpful."

Interviewee #46, an Asian American male-owned business, Interviewee #47, a white male-owned business, Interviewee #48, an Asian American male-owned business, Interviewee #50, a white male-owned business, and Interviewee #60, an Asian American male-owned business, described Caltrans' personnel with whom they dealt with as having been "always very professional" and "very positive." Interviewee #46 stated that there was always someone who could answer his questions on job sites and during the bidding process.

Interviewee #54, a Hispanic male-owned business, said that we had "no problem" with Caltrans officials and staff in his role as a supervisor for private contractors. Interviewee #52, a white male-owned business, described the persons with whom he had dealt at Caltrans as "very nice" and said that they answered all of his questions. Interviewee #75, a white male-owned business noted the same, and feels that Caltrans officials tend to be knowledgeable. Regarding his experiences with Caltrans officials and staff, Interviewee #9, a white male-owned business, said that "[g]enerally I have a high respect for 80% of their staff. And just like any group of people there's 20% of the staff that give the other 80% a bad name."

Interviewee #82, a white male-owned business, stated that his experience with Caltrans officials and staff has been pretty positive. Most of them have been quite cooperative and seem to be very appreciative of his efforts to try to educate them on the job as to the specific work he performs.

A small or micro business, stated he has had very positive experiences with Caltrans employees, he pointed out that they "always treated me and my company fairly without regard to race, sex, creed, or color." He stated "overall, Caltrans is the easiest agency within California government to work with and most certainly is the most 'open' agency, especially with regards to individual employees at all levels." (Written testimony submitted 3/19/07).

Several of the interviewees indicated mixed and/or less favorable experiences and interactions with Caltrans officials and staff. Of those with less favorable experiences and interactions with Caltrans officials and staff, several interviewees attributed that sentiment to perceived bureaucracy within Caltrans.

Interviewee #19, a Hispanic male-owned business, stated that the Caltrans staff can tend to be a little bureaucratic and a little difficult to work with. He said that sometimes Caltrans ties his hands by stipulating certain things that are not industry standard or not realistic. In general, Interviewee #23, an Asian American male-owned business, had a very negative view of Caltrans staff and believed that they were simply not interested in hiring smaller companies in the same way as other public agencies (e.g. BART). Interviewee #23 stated that many people who are actually making decision about contracts for Caltrans and who have considerable discretion basically just hire the large companies with whom they have existing relationships rather than hiring small DBE companies.

Interviewee #22, an African American male-owned business felt that in general, Caltrans' staff were unusually difficult to deal with, as compared to local agency staff on projects of similar scope. Interviewee #22 mentioned many instances of Caltrans staff interactions on local agency jobs that were problematic. Interviewee #22 also described the process of bid review as onerous, which he viewed as unnecessarily burdensome, again comparing it to his experience with local agencies. He attributed the bid review process as the reason his company has not received contracts.

According to Interviewee #26, a white male-owned business, there are "too many people in their [Caltrans'] chain of command." Interviewee #26 also stated that it was his experience when working on Caltrans projects that "you can't get answers quick[ly] when you're out in the field building these projects, [but] sometimes you need answers fast." Caltrans' on-site inspectors, he said, "just won't make common sense decisions [because] they feel like they gotta get an okay from up above." Interviewee #26 also felt that Caltrans' project plans and specifications do not allow for enough working days for small contractors and that Caltrans engineers use "unrealistic budgets."

Interviewee #29, a Hispanic male-owned business, believes that the Caltrans officials and staff are very "legalistic," and analogized the feeling of dealing with them as in a deposition. Interviewee #5, a white female-owned business, felt that an "adversarial" relationship had developed with Caltrans engineers over the last few years. One problem noted by Interviewee #5 was that authority is still with senior engineers higher up in the Caltrans bureaucracy, instead of with the resident engineers who are on-site. Interviewee #47, a white male-owned business, experienced challenges in the negotiation stage of the contract where the process can be lengthy.

Interviewee #51, a Hispanic male-owned business, described his experiences with Caltrans officials and staff as positive when dealing with the local jurisdictional level than with Sacramento, and that this arrangement was better and made the work go easier.

Interviewee #33, a Hispanic female-owned business said that the company's dealings with Caltrans officials and staff had been okay, except for their dealings with Caltrans' auditors. According to Interviewee #33, an auditor came into the company's office in 2005 and spent several days going through the company's books. But, she said, this auditor used a non-typical week in which Interviewee #33 had spent many hours volunteering for different organizations to calculate Interviewee #33's hourly rate, and, as a result, Interviewee #33's hourly rate came out substantially lower than it should have been, such that the company actually lost money by working on the project. Interviewee #33 stated that she had since "turned down a few [Caltrans] projects" because she was better off not doing them.

Interviewee #67, a white female-owned business, used the words "nice" and "perfunctory" (emphasizing the latter) to describe Caltrans' officials and staff, and she said that her experiences were

"totally different" when meeting engineers one-on-one than when encountering the Caltrans bureaucracy and/or attending its meetings. Interviewee #68, a white male-owned firm, said that she had been waiting for two or three years for one Caltrans project on which his firm is listed to go through, because Caltrans keeps changing the criteria and its departments keep going back and forth.

The experience of Interviewee #28, a white male-owned business, relayed both good and bad experiences with Caltrans officials and staff. Offering an overall characterization of his experiences with Caltrans, Interviewee #28 stated, "It's big. That's the problem." The chain of Caltrans bureaucracy is the issue.

CATA #1, an Asian American trade association described his and the Association's members' interactions with Caltrans officials as "very positive" and said that these officials demonstrated a willingness to listen. He said, however, that it was a "different story" when it comes to those in the Caltrans' middle management who are awarding contracts.

A small design firm was upset because the notice of the public hearings was sent after the public hearings started. (Written testimony submitted 3/21/07).

CATA #12, an African American trade association, said that if a Caltrans manager is not encouraging small business participation, then everyone "run[s] into a brick wall" because the people in Caltrans working under this manager adopt his or her attitude, and that some of the Caltrans managers simply do not care about the DBE program and/or small business participation. Moreover, said CATA #12, this attitude can bleed over into and affect the attitudes of the people at Caltrans who are reading and deciding on bid proposals and RFPs.

Some of the interviewees attributed their less than favorable experiences to financial concerns. Interviewee #49, an African American male-owned business, stated that most of his experiences with Caltrans officials and staff were good, but he spoke of one incident were he refused to allow a prime contractor to dictate price terms. Interviewee #49 said that Caltrans "for whatever reason . . . set up an interview" in which the prime contractor was able to tell his side of the story, but Interviewee #49 was not, and the Caltrans official unjustifiably questioned his business practices.

This sentiment was echoed by Interviewee #34, a white male-owned business. Interviewee #34 stated that overall his experiences with Caltrans officials and staff had been "favorable," but he identified as a frustrating issue that Caltrans staff has to come up with third-party cost estimates and have to confirm cost estimates within a certain percentage even though they often do not have the expertise to do so.

According to CATA #2, an African American trade association, Caltrans officials and staff are good to work with, try to help, have a "can do attitude," and that they are good about listening to his and others' concerns.

CATA #6, trade association representing heavy engineering contractors, has found Caltrans to be very interested in working with her and her members – they have been extremely responsive and helpful most of the time.

CATA #7, a Filipino trade association, commends Caltrans' commitment to increasing small business participation.

CATA #9, an association of consulting, engineering, and land surveying firms, has mixed experience with Caltrans' officials and staff; there is a "disconnect" between upper level management and staff who actually issue change orders. For example, he stated Caltrans legal opinions have been very "negative" and are not beneficial to the subconsultant side, and it is too expensive for smaller firms to come up with a contrary legal opinion (goals related and related to a prime contractor not meeting their goals).

CATA #10, as Asian American trade association, does not have much experience with Caltrans officials and staff but in general, they feel they are okay.

Caltrans online website.

Many of the interviewees indicated that the Caltrans online website is helpful and contains readily available information. Interviewee #1, a Native American male-owned business, said Caltrans' website is easy to use, informative. Interviewee #9, a white male-owned business, relayed that he was generally "very pleased" with Caltrans' website. Interviewee #27, an African American male-owned business, and Interviewee #26, a white male-owned business stated that the Caltrans website is "good," and that "it helps."

Interviewee #19, a Hispanic male-owned business, finds the Caltrans website helpful in monitoring work and upcoming opportunities, and also with road conditions. He uses their website a lot and finds it very helpful. Interviewee #33, a Hispanic female-owned business, stated that she had been to the Caltrans website "a lot" and that she "generally found everything [she] need[ed]."

Interviewee #32, an Asian American female-owned business had been to the Caltrans online website "because of the certification," and she said that she was able to find everything she was looking for there. Both Interviewee #35, a white female-owned business, and Interviewee #41, a white male-owned business, indicated the website was "informative." Interviewee #47, a white male-owned business, and Interviewee #50, a white male-owned business, described the website as "[g]ood and user friendly."

Interviewee #39, a Hispanic male-owned business, stated that the Caltrans website has "been good." Interviewee #39 noted particularly that the website was helpful in that it allowed him to see what the payment schedules are for Caltrans jobs and to follow through and "make sure that we're being dealt with fairly." Interviewee #11, a Native American male-owned business, stated that the site has provided him with whatever he was looking for. Interviewee #51, a Native American male-owned business, stated that Caltrans' website "is not complicated" and that he was able to find whatever he is looking for on there.

Other interviewees described mixed experiences with the Caltrans online website. Interviewee #31, an African American female-owned business also stated that he and others from the company go to Caltrans' website to look for projects. But, Interviewee #31 said, Caltrans does not list all the projects, and, in any case, there is always a way that through change orders large contracts can continue on without the work going back out for bidding and/or proposals. Interviewee #31 suggested that Caltrans could improve its website by not only listing all of its projects, but also by including for each project a statement of what qualifications are needed in order for a firm to work on that project.

Interviewee #46, an Asian American male-owned business, said that he used the Caltrans website to get a listing of firms to solicit on different projects and felt that it was a helpful resource in this regard, but he did note that the information on the firms that are listed needs to be updated since, according to Interviewee #46, "a lot of" the firms listed have gone out of business or changed their name, phone number, or fax number.

Interviewee #7, a white female-owned business, described the Caltrans website as "good," and Interviewee #7 said that they were able to find everything they needed on there. However, Interviewee #7 stated that "it's not always easy to find because they'll move it," and Interviewee #7 felt that "they've been moving a lot."

Several interviewees indicated that the Caltrans online website is not "user-friendly" and that it is difficult to navigate. Interviewee #9, a white male-owned business, noted that that the Caltrans online website "is so large that sometimes it's hard to find" what he's looking for. Interviewee #5, a white female-owned business, relayed problems with downloading materials from the Caltrans website, mainly because the company is in a more rural area and cannot get high-speed internet service. Interviewee #5 stated also that it was hard to find projects on the website, and that she and other staff spent a lot of time having to sort through the projects in order to determine which ones are in the company's area.

Interviewee #8, a Hispanic male-owned business, felt that the Caltrans website "could be a little easier to navigate through" and that "[t]heir search engine could be a little more useful." Interviewee #8 also felt that the website would be a better resource if Caltrans did a better job of posting bid opportunities there. As for the Caltrans website, Interviewee #16, a white male-owned business, called it "a mess" and said that "[t]hey need to get somebody to reorganize that thing." According to Interviewee #16, "[i]t's bulky, it's hard to use, and you can't find information very easily.

The Caltrans website is "not very easy to navigate," according to Interviewee #85, a white male-owned business. Interviewee #54, a Hispanic male-owned business specifically stated that he had been to Caltrans' website a couple of times but found nothing useful and never went back. Interviewee #58, a white female-owned business, notes that the website is not particularly user friendly, and that it's easier to get information about Caltrans bids through email notification rather than going onto the website.

Other interviewees had various comments and recommendations about their use of the Caltrans online website. Interviewee #19, a Hispanic male-owned business, does not think that the website gives adequate notification of the work available. In that regard, Interviewee #21, a Hispanic male-owned business, has been to the Caltrans website but does not use it much. He uses Builders Exchange as his primary resource.

According to Interviewee #20, an Armenian male-owned business, he would recommend that Caltrans use their website to have the jobs and paperwork categorized so that the user can just go to the website and engage in an interactive process to get the paperwork done online or at least available to print, instead of calling somebody to get the paperwork. Interviewee #20 uses the website to find out about job opportunities, and he also checks Builders Exchange. Interviewee #49, an African American male-owned business, said that he could get a list of Caltrans jobs from its website if he wanted to, but that he usually gets his information from the green sheet first and then visits the website, as opposed to going to the website in the first instance.

Interviewee #26, a white male-owned business, said that Caltrans should provide phone numbers of individuals within Caltrans with whom someone looking on the website could speak "because there's [sic] just too many . . . questions that just can't be answered by the computer." According to Interviewee #26, "sometimes it's really hard to get through to a talking body." Interviewee #39 indicated that the listing of jobs on the Caltrans website could be improved, saying "[i]f that was better on the website we would probably look into the web site to find jobs." He also suggested that Caltrans offer a way for firms to sign up for an email list serve that would notify them of upcoming jobs. According to Interviewee #11, a Native American male-owned business, to learn about opportunities, advertising, or soliciting bids, or RFPs by Caltrans, the company looks at Caltrans' website.

CATA #1, an Asian American trade association, stated that he had found the Caltrans website to be "okay" and had no problems accessing it or information on it, and that he had heard nothing from the Association's members about Caltrans' website. CATA #2, an African American trade association, said that the Caltrans website is "hard to maneuver" and that one has "got to be a genius to use it." Although there is good information on the website, said CATA #2, many small business owners do not have the time or resources to be on there all the time (as do their larger competitors). CATA #2 also said that that the Caltrans website should not be the only resource that businesses can access to obtain the information they need. CATA #2 felt that the list of certified DBE firms provided on Caltrans website is a "good source." CATA #2 said that prime contractors and others have access to it, and that it is a good tool for researching and locating firms.

CATA #3, a Hispanic trade association, described Caltrans' website as "pretty straightforward," but suggested Caltrans could improve the website by putting look-aheads on there and making it interactive, so that once a business registers for a certain type of work it will get email and other notices of upcoming jobs. CATA #9, an association of consulting, engineering, and land surveying firms, stated the Caltrans website is very generic, and "presents the information they want to present." He points out it does not provide any information on the SOQ. CATA #9 said a look-ahead is posted for a district, but it is sent to headquarters in Sacramento to be posted [on the website]. Sometimes, he said, the district doesn't even know the contract has been posted. CATA #10, an Asian American trade association, stated Caltrans has a good website.

DBE directory.

Several of the interviewees were familiar with Caltrans' list of qualified DBEs and had experience using Caltrans' list (Interviewee #1, #5, #7, #9, #10, #17, #18, #26, #33, #34, #42, #46, #47, #49, #51, #59, #61, #74 and #76).

Interviewee #5, a white female-owned business, stated that the company's only experiences with Caltrans' resources for locating qualified DBEs are with a list of DBEs published on the Caltrans website. Interviewee #5 indicated that this list is not as helpful as it could be, since it contains businesses who are located far away geographically and therefore would not be able to do or interested in doing work in the company's principal area.

Interviewee #9, a white male-owned business, stated that he was aware of the list of DBEs that Caltrans provides and posts on its website, but that he "want[s] to hire qualified DBEs based upon personal knowledge and personal friendships . . . just as I want to hire my doctor or dentist." Thus, Interviewee #9 generally tries to avoid what he calls "the yellow pages approach." Interviewee #42, an

African American male-owned business, noted that, with respect to locating qualified DBEs, he stated Caltrans or Clearinghouse has a list of certified DBEs that they “will send you.”

Interviewee #46, an Asian American male-owned business, noted that the municipalities for whom he works "get their [DBE] list from Caltrans" and "tell you to go to Caltrans' website to . . . find DBE subs." Interviewee #46 also stated that the company advertises for the majority of jobs on which it uses subcontractors, and that such advertising is in industry/trade papers and via faxes to the firms on Caltrans' DBE list, which Interviewee #46 said the company uses "all the time," and which he felt was a "very good resource."

Interviewee #29, a Hispanic male-owned business, stated that he knows that Caltrans provides a directory of ready, willing, and able DBE contractors, because “I always check that to make sure I'm still on it.” Interviewee #33, a Latina, female-owned business, also had experience using the Caltrans DEB list/database, to which she noted many other agencies and local governments provide links from their own websites.

Interviewee #34, a white male-owned business, said that the firm's marketing business development staff has access to the listing of Caltrans-certified DBE firms and that they would "regularly consult that list if in fact [the company] were attempting to find a DBE subconsultant." But, according to Interviewee #34, the company does not use the list too much because they already have "a regular network of DBE firms" that they "regularly" contract with for particular tasks. Interviewee #46, an Asian American male-owned business, described the Caltrans DBE list as a "very good" resource. Interviewee #46 said that other agencies often referred him to the Caltrans list.

Interviewee #49, an African American male-owned business, noted he was aware of Caltrans' DBE list/database and said that in the past Caltrans offered (at least indirect) assistance to contractors looking to locate DBE firms but that he did not know whether this practice continues. Interviewee #51, a Hispanic male-owned business, also said that what resources Caltrans provides in the way of locating DBE firms are "good" and "workable," and that "[w]hatever they can do to continuously improve is better." Interviewee #76, a white male-owned business, is aware of lots of online listings of ready, willing, and able DBEs. Interviewee #76 thinks Caltrans also provides directories for DBEs, but he hasn’t personally used any of them.

Interviewee #7, a white female-owned business, thought the Caltrans DBE list "is a good list" and "isn't a problem," and stated that "if any of the prime firms say they have a problem finding DBEs or minority- or women-owned subs they're lying." But Interviewee #7 suggested Caltrans should verify that firms on the DBE list are actually certified in their listed areas of specialization, noting he had seen firms that actually provide drafting services listed as engineering firms.

Interviewee #61, an Asian American male-owned business, indicates that DBEs are easy to locate because they are posted on the various industry websites. Interviewee #74, a white male-owned firm, believes that DBEs are well promoted by Caltrans. He has asked Caltrans for help in locating minority contractors and Caltrans as helpful in providing lists.

Interviewee #85, a white male-owned business, recalls an instance when he was bidding for a project with a strong DBE requirement. He went through all the Caltrans directories of DBEs, as well as other publications, but could not find any DBEs that worked in his specialized field. The lists

provided by Caltrans were seriously out of date, because many of the firms he called were no longer in business.

Several of the interviewees were not familiar with Caltrans' list of qualified DBEs and did not have experience using Caltrans' list. Interviewee #19, a Hispanic male-owned business, stated that if he were to need DBEs, he does not know where to go to find qualified DBEs. Interviewee #19, a Hispanic male-owned business, does not know how to find out what primes have expressed an interest in a particular RFP so that as a subconsultant or subcontractor can contact that prime about submitting a price quote. Interviewee #32, an Asian American female-owned business, stated also that she found out by "word of mouth" about other DBEs to whom her firm subcontracts work, and that she did not have any experience with using Caltrans' resources for this purpose.

Interviewee #40, a white male-owned business, doesn't have knowledge of how to locate qualified DBEs because they use the same companies all the time. Interviewee #50, a male-owned business, doesn't know of any resources provided by Caltrans regarding how to locate qualified DBEs.

Interviewees #52, a white male-owned business, Interviewee #48, an Asian American male-owned business, and Interviewee #54, a Hispanic male-owned business, were not aware of any resources provided by Caltrans for locating DBE firms. Interviewee #56, a white male-owned business, knows that you can locate qualified DBEs, but he stated that such a listing is not readily available over the internet or anything. What is listed on the internet "doesn't work that well."

Interviewee #64, a white male-owned business, is not aware of how to locate qualified DBEs. He is not sure whether Caltrans maintains a list. Interviewee #67, a white, female-owned business, and Interviewee #68, a white male-owned business, were not familiar with any resources provided by Caltrans for locating DBE firms. Interviewee #75, a white male-owned business and Interviewee #11, an Indian, male-owned business, do not know of any listing of DBEs.

Several of the interviewees had recommendations and general observations regarding Caltrans' listings of DBEs. Interviewee #15, a white male-owned business, did say that he sometimes had trouble finding the right sort of firm for a job and that more updated lists of available qualified DBE firms in various disciplines might be helpful. To find out what primes have expressed an interest in a particular RFP, Interviewee #29, a Hispanic male-owned business, suggests that he could call for the list of attendees at the mandatory meeting. For federal projects, the government will release names on the webpage, but he does not believe that California does this.

Interviewee #18, a Native American male-owned business, stated that finding qualified DBEs is usually a matter of experience with knowing who to contact that will actually work up a price. Sometimes DBEs will ignore requests from prime contractors because they have been discouraged from all of the requests they get that do not actually consider them. The problem is exacerbated by the fact that when a contractor is just beginning in the business, it is asked to list its category of work and in the beginning many contractors list everything because they want to try to do everything. It is very hard to change those categories later, even when the company has focused on doing one or two things. The result is that the company will still get requests for things that it selected as an area of work but the company does not do that area of work. A similar issue is that the categories are too broad.

Interviewee #8, a white female-owned business, indicated that the company does not rely on the Caltrans' DBE database, but, instead, uses a company that locates subcontractors based on the criteria that his firm gives them. Interviewee #72, a white male-owned business, recalls an instance when he was bidding for a project with a DBE requirement. Interviewee #72 went through all the Caltrans directories of DBEs, as well as other publications, but could not find any DBEs that worked in his specialized field. The lists provided by Caltrans were seriously out of date, because many of the firms Interviewee #72 called were no longer in business.

Interviewee #81, a Hispanic male-owned business, finds DBEs from whom to solicit bids through his personal contacts. Interviewee #5 a white female-owned business, noted that it receives the same list of DBEs from Caltrans for every project. Interviewee #14, a white male-owned business, maintains a list of subcontractors and monitors who on the list is a registered DBE. When they don't have someone on the list that meets the requirements for a particular project he said, the company will often look to lists of DBE's maintained by local agencies rather than to Caltrans because these tend to be more reliable and up to date than the Caltrans list. Overall however, Interviewee #14 tends to use the same DBE's from project to project if they are otherwise good at their respective jobs.

Interviewee #40, a white male-owned business, usually uses the lists of DBE companies and sends out a lot of requests for quotes, but it is her experience that about one third (1/3) of the companies are either out of business or have nothing to do with the actual needs for the project.

CATA #1, an Asian American trade association, said that the resources provided by Caltrans for locating DBEs were "a little on the short side" and that Caltrans needs more staff in its civil rights department. CATA #3, a Hispanic trade association, said it would be good if Caltrans would publish a directory of DBE firms like that provided by the Metropolitan Transportation Authority, which he described as a "very good" and a "good resource."

CATA #9, an association of consulting, engineering, and land surveying firms, indicated that it is almost all word of mouth to find a qualified DBE. A firm can be in the database as a DBE, but there is nothing to tell you if the firm is qualified or not. Also, the period between posting of the contract and submission of the SOQ is short so it is hard for firms to link up. CATA #10, an Asian American trade association, believes Caltrans should list the SIC code so they can know who does what on the DBE list.

Perceived General Barriers to Participation with Caltrans

All the interviewees were asked to relate their experiences, perceptions, and anecdotes in connection with conducting work on Caltrans contracts in general. Much of their responses are documented in other sections of this report. When asked specifically to identify any perceived barriers to their participation in contracting and procurement with Caltrans, the interviewees offered the anecdotes below. These anecdotes and perceptions are categorized according to the type of perceived reported behavior.

Contracts too large.

Many of businesses and trade associations listed the size of Caltrans projects as a barrier to receiving or pursuing work with Caltrans. These interviewees stated that Caltrans' contracts are too large for small or mid-sized businesses to bid as prime contractors. Interviewees acknowledged that

the nature of highway and bridge construction is that the work tends to be multi-faceted and large in scope. However, many business would like to see Caltrans make an effort to break these projects up into smaller pieces to facilitate opportunities for small or medium size firms to act as prime contractors.

CATA #4, an Asian American trade association, stated that until April 10, 2007, Caltrans made little to no efforts to break down contracts. Only a few of its members had done Caltrans work because the jobs were simply "beyond their capabilities" to handle. On April 10, Richard Lange, Chief Engineer for Caltrans, issued a directive to all the districts to create contracts one-half million dollars or under so that smaller firms could participate as primes. This directive was motivated by a number of factors, including the Governor's pledge to increase small business participation and the Small Business Council's lobbying efforts over the last several years. CATA #4 stated that this directive was "a good start." CATA #4 understands that it is hard for Caltrans to break contracts up and that there may be costs associated with this process. However, the association feels it is an important step in the initiative to grow small businesses. According to the association, even 500 thousand dollar contracts are "doable" for DBEs.

CATA #4 uses the San Francisco Airport as an example of an entity that has done a good job breaking its work into smaller contracts. According to CATA #4, the Airport has broken $1-2 billion jobs into $75,000-$80,000 projects. Small firms are now able to act as primes. It is important, said CATA #4 for architecture and engineering firms to "get their names on the plans" to build their resumes. They can use this experience when bidding other jobs.

Interviewee #12, an African American male-owned firm, believes that the Caltrans jobs are "a little too big" for his company. He anticipates that in the near future the company's bonding ability will be near $100-$200,000, which will allow the company to do small Caltrans jobs.

Interviewees #7, a white female-owned business, works primarily as a prime in the private sector and works primarily as a subcontractor on public works projects because "the contracts are usually so large . . . [that] the people doing the selection are looking for huge numbers of people." Interviewee #7 stated that the issue was with the size of the contracts, "not the size of the work." Caltrans places a heavy emphasis on the size of the firms it selects and that, as a result, the company was shut out of opportunities to work as a prime contractor for Caltrans while its larger competitors were able not only to get the work but also to build capacity and skills in areas where they previously had no expertise (though #7 did) by virtue of getting the jobs – and thus experience – over and over again.

Interviewee #15, a white male-owned engineering-consulting firm, recognized that for smaller companies, the size of contracts might be an issue. He was unsure whether segmenting Caltrans projects was possible since road projects are necessarily large. He felt that joint ventures were a better answer to allowing small businesses to have greater participation on Caltrans projects.

A white female-owned professional services provider in the construction management field testified at a public hearing in Los Angeles that "bundling is a problem. Because these are megaprojects, we can't go as a prime. On some things we can team together and be like a prime. But on the megaprojects, it just absolutely eliminates the small guy." (P.H. Los Angeles, 3/29/07). She acknowledged that "it's difficult for the agencies to have to manage so many contracts, but I think that's why there is a trend toward project managers who do that for them, who manage all the projects."

Interviewee #2, an African American excavation company in business for twenty (20) years, has only done one job for Caltrans because his company is too small to be considered for even subcontracting on the large Caltrans jobs.

Interviewee #42, an African American male-owned firm, has done a lot of work with schools and with prisons but with respect to Caltrans "when you are a small contractor you can't really do it." He stated that Caltrans requires bonding and that has posed some difficulty for him. He stated that the average price range of his contracts in the public sector are in the $75,000 to $1 Million dollar range.

Some DBEs noted that the size of public sector projects is an obstacle for smaller DBEs, but did not specifically reference Caltrans. CATA #1, an Asian American trade association, said that it was equally difficult to receive work in the public and private sectors, and that the private sector should be further divided into big and small. He said it was hard to compete with big firms in the private sector and even more difficult to compete in the public sector. In the public sector he said businesses were barred for "very subtle reasons", and public agencies do not say why firms are not awarded contracts, but always award contracts to large firms on the misguided belief that these firms have more capacity and experience than small businesses. He stated that a majority of the association's members were so frustrated by these invisible and/or subtle barriers (namely size) that they no longer even try for public contracts.

He explained that he was now competing with large firms on an government agency contract for which his firm did not get short-listed. He said that he requested a debriefing and went in to speak with agency officials a few months ago. He discovered at this debriefing that no one had given a close look at his firm's proposal. He believes this was because the agency's project managers do not know him. He said that he had experienced this same thing happening with multiple agencies, and spoke of "mental barriers by lower tier managers in public agencies."

Caltrans pricing.

Some of the businesses stated that Caltrans pricing is below market. Interviewee #3, an Asian American male-owned firm, does not like to work for Caltrans because of issues with Caltrans management. Interviewee #3 said that Caltrans' rates are at "force account" (in favor of Caltrans), such that subcontractors lose money. He believes Caltrans standard rates are outdated and not reflective of recently increased costs for fuel and materials.

Interviewee #47, a white male-owned consulting firm, stated that some Caltrans districts are "driving a really hard bargain relative to market prices." Since the firm operates in the professional services realm, it must either accept Caltrans prices during the negotiation phase or decline the contract.

A female-owned DBE testified at a Stockton public hearing that she is not able to charge as much for biologists on Caltrans projects – "that's a bid barrier against going after any more Caltrans work at this time because the disparity is too great in terms of charge rates for the same amount of work that I'm doing" in the private sector. "Why would I work on a job for Caltrans at $64 an hour, when I can take the same guy and charge him out at $95 an hour and work for AT&T." (P.H. Stockton, 3/20/07).

Administrative expense/bureaucracy.

Some businesses stated that it is more expensive to work with Caltrans due to certain administrative expenses. A female-owned DBE testified at a Stockton public hearing that "the paperwork that Caltrans requires to track a job through the Caltrans process" is a barrier to her pursuing work. "As a subconsultant we have to do a heck of a lot more paperwork than normally would be necessary, to demonstrate that we have actually charged on a particular job … it takes time for the bookkeeper to process all this. I cannot charge the bookkeeper out on this because she's supposedly overhead, yet she has to drop whatever she's doing and spend three to five hours dealing with an $84 handwritten receipt." (P.H. Stockton, 3/20/07). CATA #5, a trade association representing subcontractors, listed difficult bidding conditions and unfavorable contracts and inability to bond as obstacles to pursuing work in the public sector. Interviewee #70, a white male-owned firm, stated that there is more paperwork in the public sector, "with certified payroll reports and things like that."

Some interviewees listed "red tape" and bureaucracy as reasons they avoid Caltrans work. Interviewee #76, a white male-owned firm who does 10% of its public work for Caltrans, has chosen to focus less on Caltrans and more on cities. He feels it is easy to work with cities because there is less "red tape." He has refused to bid some cities because the bidding process is too complicated and there are too many forms to fill out. He also feels there is less potential liability working with cities than on freeways for Caltrans. Interviewee #64, a white male-owned firm, also stated "there is a lot of red tape." California should take the lead from local governments who can put out a project faster with less paperwork and get the job done before Caltrans. For a local project, everything comes in one book and you fill it out and you are done.

A female-owned DBE testified at the Stockton public hearing that "the bidding process will not allow for any contingencies." She stated that unforeseen circumstances often arise on her jobs and it takes Caltrans three to five days of negotiation to make a decision. (P.H. Stockton, 3/20/07).

CATA #4, an Asian American trade association, mentioned expensive software as an obstacle for DBE architecture and engineering firms. For the last 10 or 15 years, architects and engineers have needed a computer program called "CAiCE" to view Caltrans survey plans and drawings. This program is expensive and requires employee training in Florida, which can cost up to $35,000 for each engineer. If an architecture and engineering firm is not capable of using CAiCE, they are considered non-responsive by Caltrans. Now Caltrans has decided to drop CAiCE in favor of a program called "INRODS." This is yet another expense for architecture and engineering firms. The Small Business Council has been talking to INRODS to develop a training program for SBEs and DBEs, either over the Internet or at a local college or university. The distributor is also discussing discounts for DBE firms. According to CATA #4, this would help.

A small business owner stated that he has found Caltrans difficult to get business from and he has had meetings, provided quotes, and has had no results. (Written testimony submitted 3/14/07).

Caltrans work "in-house."

Some businesses reported that Caltrans' approach of keeping certain work "in-house" has acted as a barrier to them receiving Caltrans work. Interviewee #4, a Native American male-owned firm, used to do a lot of Caltrans work and reported mostly good experiences. However, when Caltrans started doing architecture and engineering work in-house, the company, along with other

subcontractors and prime contractors who had been working together on these projects, lost the work. The company now operates almost exclusively as a prime contractor on housing development/subdivision work on Native American reservations.

Interviewee #31, an African American female-owned firm, feels that she has "not been as successful" as she should have been in receiving Caltrans work. She described Caltrans as "really unique," in that, unlike other public agencies, Caltrans keeps its utility work in-house. Interviewee #67, a white female-owned business, who has never received a Caltrans project, approached the regional Caltrans office in San Luis Obispo to look at their drawings and discuss the possibility of her company doing work for them. However, Caltrans eventually decided to keep its scanning in-house.

Caltrans using the same large firms.

Several interviewees complained that Caltrans seemed to select the same large prime contractors for all the projects. Some interviewees recognized that this might be due to the size of the contracts and the fact that only a few firms are capable of handling such capacity. Interviewee #17, a white male-owned firm, has had "very little success" in getting work in the public sector, and attributes this lack of success, particularly with respect to Caltrans, to there being a "good old boys club" such that the same contractors receive all the Caltrans work. He stated that "[e]very project just seems to go to the same four of five bidders no matter what we do."

Interviewee #22, an African American male-owned firm, although registered as a DBE, has received no work with Caltrans. He perceives Caltrans' "overall philosophy" of contracting as strongly biased towards larger architecture firms with global reputations and strong contacts within Caltrans. He also stated that Caltrans is difficult to deal with due to the level of bureaucracy. He described having to deal with as many as twenty people in applying for a Caltrans contract compared with two or three when applying for contracts with local agencies on projects of similar scope.

Interviewee #29, a Hispanic male-owned firm, stated that his biggest barrier to getting public sector work is "incumbency." He believes that the public agencies want to use the same people they have been using. Because they are not allowed to renew or extend the contracts, they put them back out for bid. According to Interviewee #29, 80% of the time, the same contractor is rehired. He describes it as a "cycle" that they go through. He has made five separate proposals to Caltrans from April 2001 to April 2002, and was short listed on three different projects in Sacramento, Los Angeles, and Utah. The projects ended up going back to the incumbents. He describes the process as very "laborious" since it requires the team to procure its own equipment and go to the site to do an assessment, which takes several days to prepare. Interviewee #29 described it as a "tiger leash."

CATA #9, an association of consulting, engineering, and land surveying firms, reports that its members are not involved in the bidding process; rather, they respond primarily to RFQs (requests for qualifications). He stated this is qualifications based. "The perception is that if you are a smaller firm or a DBE firm you won't have the horsepower that Caltrans is looking for to take on some a lot of these contracts. Even though you may have the right people at the right time, the perception is that if you don't have four times as many people as the contract might need, you're not going to be considered for it. . . . As a prime, it is difficult to gather enough staff without putting together a complicated team, and then when they see a complicated team they also tend to also not look favorably upon you because they consider it to be too much management." So, it is difficult for the consultants who are going after projects as a prime to compete against a lot of the larger firms. If they

go after a contract as a subcontractor, they have to have something unique a lot of times to get them on the team.

A small DBE design firm, related an experience in which they were short-listed on a Caltrans RFP and were ranked number two behind a large prime firm. They learned that the large prime firm prepared the pre-design study for the RFP, and they still wonder whether their firm and others "even had a chance." (Written testimony submitted 4/27/07).

A certified DBE and MBE stated, "though the industry may not be placing undo burden on DBEs directly the lack of knowledge of the DBEs in this industry has, I believe, placed many barriers that most have not been able to surpass." (Written testimony submitted 3/20/07).

A woman travel agent stated that when she "participated in at least two of [Caltrans'] forums, no one knew anything about potential business opportunities for travel." With respect to the travel industry, "it appears that DOT works exclusively with the mega agencies (i.e. American Express) . . . There is no sincere effort or any effort to address this at all." (Written testimony submitted 4/04/07).

A white female owned firm stated, "frequently, we don't have the purchasing power of large companies to satisfy insurance and other contract requirements to compete for work." (Written testimony submitted 3/2607).

Some businesses viewed Caltrans as more receptive to large firms. Interviewee #8, a Hispanic male-owned firm, stated that "some of the larger companies have a lot more pull with Caltrans than the little guys do" and thus can get away with more, and are not held to the same standards as smaller firms "everywhere from the bid process on down to building."

A white female-owned professional services provider in the construction management field testified at the Los Angeles public hearing said that Caltrans attitude is if you are a "small business, you can't do it … And it's just not true … smaller businesses have established themselves as reputable and able to do the work and there's no reason why they shouldn't have the equal playing field." (P.H. Los Angeles, 3/29/07).

Some trade associations attributed this to the attitudes of the Caltrans staff. CATA #8, a Hispanic trade association, described the discrimination within Caltrans as "institutional" because "state government is reluctant to change" and "big government likes big corporations." "State workers don't go to work in the morning with the objective of discrimination. They go to work seeking the achievement of results based on past practices. Caltrans is comfortable with existing contractors. Just go to any pre-bid conference and see the array of prime contractors, white male dominated." "Contracting with Caltrans requires experience, capital and bonding. To satisfy construction requirements Caltrans relies on an established pool of prime contractors. This pool of "prime contractors" in all classes developed over many years. As expected the pool of prime contractors is white male dominated. The only way for DBEs to penetrate this market is for aggressive government affirmative action programs."

He explains that procurement personnel are evaluated by whether the project was in budget and on schedule. The Caltrans engineers are afraid to take chances on smaller or unknown firms for fear that their performance will affect the engineers evaluation and possibly affect their job security. This results in the engineers continually picking the larger contractors with many years of Caltrans

experience. This does a disservice to the community as local small businesses are underutilized and projects are often over-priced.

Similarly, CATA #4, an Asian American trade association, notes that the selection panels are composed of young engineers who are overly concerned with experience and feel that newer, smaller DBE firms cannot produce.

Interviewee #32 stated that Caltrans is "a pretty established agency" and said that it was going to take "many years of marketing and getting to know the players before being able to submit … our qualifications as a prime contractor." Interviewee #49 said that the agency "intentionally write[s] [its specifications] to preclude other smaller contractors" and that the impact on DBE firms (which tend to be smaller) is disproportionate.

Selection criteria.

Some interviewees mentioned Caltrans selection criteria as a barrier to firms receiving contracts. Interviewees took issue with a variety of selection criteria.

Professional service interviewees stated that the requirement that firms have past Caltrans experience makes it difficult for contracts who have never worked for Caltrans to "break in." CATA #4, an Asian American trade association, believes that unless a consultant has prior experience with Caltrans, it is difficult to win a Caltrans project. This results in the same firms getting the Caltrans work. Up until recently, Caltrans did not consider "similar" experience as part of the criteria. According to CATA #4, some changes have been made and Caltrans now looks at "comparable" work. This change has been implemented in Districts 4 and 7, but the association is unsure whether it is statewide. The association attributes the change to the efforts of the Small Business Council. The association stated that it takes longer to get these initiatives implemented in certain districts, such as District 11, without a strong Small Business Council presence.

CATA #10, another Asian American trade association, stated that the majority of its consultant members have been unsuccessful in attempts to work with Caltrans because of special requirements, including training and prior Caltrans experience.

A minority female-owned business testified at a public hearing in San Bernardino that governments are "looking for a company that has already done business with them. So you can't really quite get in there if they're saying you haven't done any business, so we aren't doing business with you." She stated that she has lost several contracts and been told by the government entity that "it was the lack of the company's experience" even though the individuals in the company have both worked for 30 years on government contracts. "I know the federal government flatly stated once that they don't want to be your first." (P. H. San Bernardino, 3/20/07).

Interviewee #70, a white male-owned firm, identified being non-union as a barrier to obtaining Caltrans work.

Other interviewees mentioned that Caltrans sometimes takes the physical proximity of the contractor's office into consideration, which in their opinion unfairly biases small DBE businesses who have fewer locations. CATA #4, an Asian American trade association, stated that some of the criteria deal with location of the architect or engineers office. This should have no bearing on the qualification of a firm to do the work. Some of these "archaic" factors have 20%

weigh. Smaller minority firms do not have multiple offices, so the criteria indirectly work against smaller, DBE firms. Interviewee #33. a Hispanic female-owned firm, identified as a barrier to pursuing work with Caltrans that the different Caltrans districts seem to have a preference for awarding contracts to firms located within that district. Interviewee #33 said that the company had applied for different Caltrans projects throughout the state but receives only jobs within her district. She said that if Caltrans is going to have a preference for using firms within its respective districts, it should explicitly state this policy. Interviewee #33 stated that this same local preference issue [of choosing contractors from a specific district] was something that she experienced in trying to get work for different cities throughout the state and in a neighboring state.

Interviewee #65, a white male-owned firm, has noticed that there is a barrier in the form of equipment dates related to Caltrans because his equipment is older, even though it is refurbished, he cannot get jobs. Also, he has had problems getting local jobs for Caltrans projects. He sees primes bringing in subcontractors from other cities and counties to perform work. Interviewee #84, an African American male-owned firm, also viewed equipment requirements as a barrier to receiving Caltrans work. He stated that Caltrans would not certify him as a DBE because he did not have his own trucks.

Selection panel.

Some interviewees stated that the composition of the Caltrans selection panels precluded certain firms from work. CATA #4, an Asian American trade association, explained that each district has a selection panel that reviews proposals of architects and engineers and selects them for work based on qualifications. CATA #4 feels the composition of the selection panel and the selection criteria may be biased toward the larger firms. According to CATA #4, within the last year, four (4) different Caltrans district offices have awarded a large architecture and engineering contract to the same mid-size firm. The firm, in CATA #4's opinion, may be able to handle one of these contracts but probably not all four. The districts did not communicate with each other to determine whether this firm had the capacity to handle four large contracts – "Caltrans is not looking at things in aggregate."

CATA #4 believes that some members of the selection panel are biased toward using large established firms who have worked with Caltrans numerous times before. According to CATA #4, young, less experienced engineers are "overly concerned" with experience and feel that newer, smaller DBE firms "cannot produce." The older, more experienced engineers are more adept at looking past fancy presentations and work on past Caltrans projects and seeing whether a firm is truly qualified. The older engineers are more likely to give a smaller DBE firm a chance. He feels that older engineers should be mixed with younger engineers on the selection panels.

Auditing.

One Asian American trade association mentioned Caltrans auditing as a barrier to professional service firms pursuing work with Caltrans. Pursuant to federal regulations public professional service contracts have to be audited. According to CATA #4, Caltrans auditing is not efficient and unfair to smaller businesses. There are two issues. First, the auditing process is untimely. CATA #4 reports that it sometimes takes Caltrans up to a year and a half to come back with the fringe benefit, overhead and profit factors. These factors determine how much profit the consultant will make. In the meantime, before the audit is completed, the firms have no knowledge of what they will ultimately be

paid. Sometimes, Caltrans will only give the firm 90% of the fee. He has heard cases where the subconsultant ends up owing Caltrans $100,000 at the end of the contract.

Second, the process to challenge an auditing decision is "cumbersome" and difficult for smaller firms. CATA #4 stated that if the big firms are unhappy with an auditing decision they bring in their large accounting departments and lawyers to fight the decision. Small firms do not have large accounting departments or other resources to challenge auditing determinations. This has been a "consistent problem" said CATA #4. Compounding the problem, according to CATA #4, is Caltrans unwillingness to work directly with a subcontractor. Caltrans audits the subcontractor, but goes through the prime. Due to these issues with auditing, some firms decide not to pursue work with Caltrans. CATA #4 said that the SBC has raised this issue to Will Kempton. He recommends Caltrans try to speed up the auditing process so the firm can decide if it wants to do the work or adjust its actions accordingly. According to CATA #4, other public agencies have better auditing procedures. Unlike other public agencies, Caltrans will not take the results of other agencies audits. Other agencies accept other different agencies' recommendations. It is fine if Caltrans wants to do its own auditing, said CATA #4, but it should conduct the process in a timely manner.

A Hispanic female-owned consulting firm testified, at a public hearing in Los Angeles, "consulting firms are subject to pre-award and post-interim audits which can take anywhere from 40 hours for a pre-award audit – and I'm talking about the auditor's level of effort … the construction industry on the other hand, is not held to this level of scrutiny." Auditing is an "excessive strain on the resources" of a small business and "it's definitely not in line with what should be customary." (P.H. Los Angeles, 4/4/07).

Experiences with Payment

Payment by Caltrans.

All of the interviewees were asked to relate their experiences, perceptions, and anecdotes in connection with Caltrans payment policies and procedures.

Several interviewees reported the negative experience of untimely direct payment from Caltrans (Interviewees #5, #8, #14, #15, #19, #21, #26, #33, #34, #38, #39, #45, #47, #51, #55, #64, #75, #79, #81, #82, and #85). Many of these interviewees indicated that Caltrans takes an extremely long time (usually a minimum of 120 days) to pay for completed work. Interviewee #21, a Hispanic male-owned business, stated that it takes many months and interim payments for work on long jobs are hard to come by. Some of the interviewees went so far as to state that they prefer not to perform work for Caltrans because the agency is so slow in making payments (Interviewees #14 and #79). Interviewee #8, a white male-owned business, and CATA #6, a trade association representing heavy engineering contractors, attributed some of the payment problems with Caltrans to the "influx of new resident engineers who aren't really experienced . . . enough to make good decisions." CATA #6 stated that new resident engineers do not feel empowered to make decisions and a lot of times this can result in them not approving work, [and] not wanting to sign off on a notice of completion . . . they're new, they don't feel comfortable, they don't want to get fired."

Interviewee #26, a white male-owned business, stated it seems that Caltrans' resident engineers get used to dealing with big contractors that can handle being shorted on six-figure contracts and carry this attitude over to their dealings with small businesses. That Interviewee also stated that "[Caltrans']

monthly progress pay estimate is, more like you know, whenever they want to pay you." Interviewee #14, a white male-owned business, indicates he prefers to work with local agencies on Caltrans-funded projects or to subcontract to Caltrans, because he gets payment faster than if he acts as a prime. Interviewee #85, a white male-owned business, noted that as a small business, slow payment is a problem because it is "financially challenging to have receivables out that far." Interviewee #18 also stated that not receiving timely payment is a hardship because the company does not have a lot of cash. As a result, noted Interviewee #18, his company may have to tap into its line of credit, which costs 7-8% to borrow money against.

Interviewee #79, an African American male-owned firm, tends to avoid public work because the money takes too long. He stated he cannot afford to work with Caltrans or other government entities. He feels that the prime contractors in the public sector are "vultures" and has had to send some invoices to collection agencies. Interviewee #79 thought that Caltrans intentionally paid late in order to squeeze out the small businesses and allow it to work principally with a select few large firms.

Interviewee #36, an African American male-owned firm, stated that local government agencies and Caltrans are typically slow to pay their bills but that Caltrans had a uniquely bad reputation in this regard. He also felt that public sector clients typically did not police general contractor's payment of their subs very well so that even if an agency paid the general, the subs on a public sector contract might not get paid for as long as 160 days.

Interviewee #36 stated that in his one experience with Caltrans payment had been relatively poor. Although he was supposed to get paid within 7 to 10 days of completion of work, he was not in fact paid until 120 to 160 days later. Caltrans paid with interest but he stated that this did not help him because he still had to make payroll and manage his cashflow situation in the interim. He felt that payment terms that allowed public agencies to delay payment so long as they paid interest in the end were not helpful to small businesses that are typically cash starved. He reiterated his point that the best solution to this problem from his perspective was to be smart about which agencies one bids for contracts with and to work primarily in the private sector where payment is far more prompt.

A DBE firm, submitting written testimony, stated that only Caltrans has a website to help determine when a prime is paid, however, "prime contractors still withhold payments past the mandatory 10-day limit, and force the un-bonded subcontractor to pay for materials that have been purchased but not installed in the project." He stated they are on one Caltrans contract now where the "change orders are not processed for several months and/or billing is missed completely. Instead of helping the DBE firm they let us twist in the wind on the paid when paid clause, even though they are supposed to help." (Written testimony submitted 4/20/07).

A WBE transportation landscape architect, submitting written testimony, stated it is not unusual to wait for six months to be paid on an invoice. (Written testimony submitted 3/19/07). An African American female-owned hauling DBE firm, submitting written testimony, sent documents to Caltrans regarding a current dispute over "prompt payment" on a federally funded highway project in California which she characterized as an "ongoing disparity experience." (Written testimony submitted 4/13/07).

An overwhelming majority of those companies having a negative experience with Caltrans' payment policies indicated that the problems are likely the result of bureaucracy in the agency's administration (Interviewees #5, #8, #19, #26, #33, #34, #39, #47, #51, #52, #64, and

#82). Interviewee #8, a white male-owned business, stated that sometimes problems are due to "an inspector who's being irrational and doesn't want to pay you[,]" that "[s]ometimes it's due to a resident engineer who's slow in processing[,]" and that "sometimes you get shorted on your quantities."

Other interviewees attributed the problem to issues pertaining to invoicing (Interviewees #5, #19, #26, #33 and #34), noting Caltrans stringent requirements for paperwork before acceptance and processing for payment. Interviewee #19, a Hispanic male-owned business, stated that Caltrans can be "petty" about invoicing, requiring that every item submitted is "dotted and crossed." According to Interviewee #7, a white female-owned business, "[i]t's a bureaucratic process and . . . most of the payment problems are due to how long Caltrans takes to process the invoices." Interviewee #7 stated that it sometimes takes as long as three (3) months for his company to get paid by Caltrans.

Other interviewees noted that Caltrans pays really well in terms of progress payments, but that Caltrans is horrible with making payments on “force accounts,” where companies perform additional work on a daily time/material basis for the benefit of Caltrans. (Interviewee #76).

When filing a claim against Caltrans for slow payment, Interviewee #5, a white male- and female-owned business, stated that it felt that the Caltrans claims process it too slow and involves too much paperwork. This sentiment was echoed by Interviewee #34, a white male-owned business, who stated that Caltrans was "perhaps the most peculiar agency" with whom he had ever worked "in terms of the strictness of requirements with respect to invoice documentation.” He stated further that, "[a]t times, the end result is that on a Caltrans contract, you get paid much slower [sic] than you would for a lot of other contracts, but the time which it takes from the time your invoice is actually approved is probably not significantly different than other entities." On the contrary, however, CATA #9 indicated that once an invoice is approved, payment by Caltrans is prompt.

Several of the interviewees noted that the problems associated with slow payment are particularly detrimental for small businesses (Interviewees #14, #33, #38, #51, #75, #79, and #81). Interviewee #33, a Hispanic female-owned business, stated that small businesses "don't have the huge budgets and bank accounts that the big offices have." Interviewee #51, a Hispanic male-owned business, noted that a lot of smaller and disadvantaged businesses simply quit bidding on government work (including Caltrans) because of slowness in payment and the impact on company financials. Interviewee #75, a white male-owned business, stated that Caltrans is always late with its payments, and that the delay has an adverse effect on his business' cash flow. Interviewee #19, a Hispanic male-owned business, stated that the private sector is better about the timing of payment. Interviewee #81, a Hispanic male-owned business, stated that the delayed payments affect his business as a going-concern. Interviewee #79, an African American male-owned business, stated that his company avoids public contracts because it cannot afford to float the project. Interviewee #64, a white male-owned business, stated the wheels of the government turn slowly, including payment.

However, according to Interviewees #72, #82 and #85 (all white male-owned businesses) unlike in the private sector where you might never get paid, you always know Caltrans will, in the end, pay. In general, Interviewee #61, an Asian American male-owned business, indicated that payment is "as expected" – "slow."

An African American DBE trucking company in business for less than a year testified at a public hearing in San Diego that due to payment issues and the increasing price of fuel "it is really hard to keep your trucks." (P.H. San Diego, 3/22/07).

A Hispanic female-owned consulting firm stated, at a public hearing in Los Angeles, "while prompt payment provisions are race-neutral, lack of enforcement of these provisions is a barrier to succeed in that they cause cash flow problems and inhibit the ability of small firms and DBEs to successfully bid and complete other projects." (P.H. Los Angeles, 4/4/07).

A white male-owned firm who testified at a public hearing in Los Angeles stated that he is seeking certification as a small business enterprise to take advantage of the prompt pay requirements. H stated that if you are an SBE and the government does not "pay you within the terms of the contract, 30 days. They pay you in 60 or 90. They owe you interest on that money … as a small business, I'm able to collect [the interest] if I fill out the paperwork." (P.H. Los Angeles, 4/4/07).

Many interviewees indicated that payment by Caltrans was no different and/or better than payment in the private sector (Interviewees #1, #3, #4, #6, #9, #10, #16, #27, #35, #40, #41, #43, #46, #48, #49, #50, #52, #54, #57, #61, #62, #65, #66, #68, #69, and #76). In general, these companies stated they had positive experiences being paid by Caltrans. Interviewee #76, a white male-owned business, stated Caltrans pays really well in terms of progress payments. Interviewee #50, a male-owned business, stated he's always had a positive experience with getting paid by Caltrans. According to Interviewees #6, a white female-owned business, #10 an African American male-owned business, and #27, an African American male- and white female-owned business, there are no problems being paid by Caltrans.

Interviewee #6, a white female-owned business, stated business with Caltrans is just like that with other customers – walk-in point of sale on a credit card. Interviewee #18 noted that from the time of bidding to the time of the award, Caltrans is usually faster with its payment than the other agencies. He further stated that other agencies are slower processing contracts, and that by contrast, "Caltrans has that down to a science." In fact, for Interviewee #18's company, Caltrans' timing was sometimes "too fast."

The trade association representatives provided a range of perceptions on payment by Caltrans. CATA #1, an Asian American trade association, stated that, he had heard "horror stories" of late payment by Caltrans to small businesses. He stated further that under the tiered payment regime, the lower-tiered subs do the work first but get paid last, and that this practice forces "a lot" of DBEs into bankruptcy and causes many DBE firms to avoid working for Caltrans. CATA #3, a Hispanic trade association, informed the interviewer that he knew of one MBE firm that went bankrupt back in the 1990s because CALTRANS was slow in paying the firm for its work. The same interviewee recounted the story of a former employer of a large general contractor who told him that the firm would purposely withhold payments on whatever basis they could come up with in an attempt to bankrupt small firms and increase their own profits.

Alternatively, CATA #6, trade association representing heavy engineering contractors, stated she has "heard good things about the Caltrans progress payments." CATA #2 stated that while he knew of firms that were forced out of business due to delays in payment and the resulting impact on financials, his and the Association's members' experiences being paid by Caltrans were okay. CATA #10, an Asian American trade association, stated that he has heard some complaints that payment is

"not that fast," and that Caltrans has a cumbersome audit process. CATA #10 further noted that Caltrans sometimes will hold payment as a result of this auditing structure.

Payment by prime contractors.

All of the interviewees were asked to relate their experiences, perceptions, and anecdotes in connection with payment directly by prime contractors on all projects, including those administered by Caltrans.

Several interviewees reported no problems with payment by primes on Caltrans projects (Interviewees #4, #27, #57, and #68). Some interviewees believed the Prompt Payment Act effectively forced prime contractors to pay in a timely fashion (Interviewees #39, #55; CATA #2, #4, and #6). CATA #4 explains that Caltrans has a prompt payment policy, whereby Caltrans has to pay interest 45 days after submittal of the invoice. This is a huge incentive for Caltrans to pay on time and it usually does. Often times, this does not get passed down to the subs or monitored by the Contract Manager. If the sub has to go over the prime to the Contract Manager, the prime gets mad. The Small Business Council would like Caltrans to adopt a policy whereby the prime must get a verification of payment on the previous invoice to the sub before Caltrans will pay the prime's next invoice to Caltrans. According to CATA #4, Caltrans said it would have its legal department look into this, but the Small Business Council has not heard anything since proposing the idea six months ago.

Interviewee #7, a white female-owned business, explained that sometimes payment is held up because there is a problem with a prime contractor's invoice, and that even though the problem or error may lie with only one subcontractors' component of any given invoice, payment to the other subcontractors is held up because Caltrans will not pay the prime contractor, thus holding up everyone else's money "until that one firm cleans up the invoice and resubmits it."

Other interviewees reported that primes contractors frequently paid slowly. Interviewee #54, a Hispanic male-owned business, said that prime contractors are "very frequent[ly]" slow in paying. Interviewee #65, a white male-owned business, and Interviewee #66, a white male-owned business, stated that "it takes some time for the money to make its way to the subs" and that this creates problematic "situations" regarding accounts receivable. As a general observation, Interviewee #19, a Hispanic male-owned business, stated that subcontractors are "at the mercy" of the prime. Interviewee #49, an African American male-owned business, stated slow payment is a barrier to pursuing work in the public sector. With regard to payment by prime contractors, Interviewee #18 noted that, as a subcontractor, payment depends upon the prime contractor's internal system for billing, and that sometimes his company is neglected. He further noted that the prime contractors are more interested in getting their payment, and, as a result, the subcontractor's payment is pushed back.

Interviewee #2, an African American male-owned business, prefers private as opposed to public contracting work because he gets paid faster. Interviewee #2's experience with public entities has been that they do not pay until as long as ninety (90) days after completion of work. The Interviewee noted this may not be a problem for prime contractors, however, it is a major problem for a subcontractor that has actually done the work but is left unpaid for up to three (3) months.

A representative of several DBE organizations stated that "not one local agency or Caltrans is enforcing prompt pay requirements. We are told they don't want to get involved in disputes between the prime and the subcontractors. Actually, the RIES and the inspectors plan on working for the primes when they retire so they definitely are not going to take the side of the sub against the prime." (P.H. Stockton, 3/20/07). Further, a female-owned DBE who testified at a public hearing in Stockton reported a ninety 90 day turn around on payment on Caltrans projects. (P.H. Stockton, 3/20/07).

Several interviewees believed the delay is attributable to the prime contractors and not Caltrans (Interviewees #10, #35, and #40). Interviewee #6, a white female-owned business, identified instances where prime contractors filed bankruptcy, changed their business name, and skipped out on payment obligations. Interviewee #16, a white male-owned business, noted that "being a subcontractor for a private contractor is probably the worst place to ever be in the business situation." Interviewee #58, a white female-owned business, noted that getting paid by primes takes a long time, notably well-beyond what it actually states in the contracts. On the contrary, Interviewee #28, a white male-owned business, stated that he is very careful to follow payment schedules with his subcontractors, particularly with the invoicing schedules.

Interviewee #51, a Hispanic male-owned business, noted “sometimes in a bureaucracy government gets so screwed up and so many people have to touch everything that it delays getting paid to primes, and the primes consequently do not pay you until they get paid because that is . . . the law . . . .” Several contractors stated that prime contractors operate on a pay when paid system. Interviewee #33, a Hispanic female-owned business, stated, “Prime contractors usually don’t pay their contractors until Caltrans pays them. So, if Caltrans pays them slowly, guess where subcontractors are? They’re at the bottom of the line.” Interviewee #39, a Hispanic male-owned business, stated that prime contracts get paid well before subcontractors.

Interviewee #49, an African American male-owned business, formerly performed subcontracting work, but because there were so many problems getting paid by prime contractors, the company ceased working in that capacity. This problem was also identified by CATA #2, an African American trade association, which indicated that a lot of subcontractors, including the association’s members, who experienced problems getting paid by prime contractors, have to stop work because of these payment issues – it “hurts them” and “kills them.” CATA #2 stated further that he knew of firms that were forced out of business due to delays in payment and the resulting impact on their financials. CATA #11, a minority trade association, stated that payment in the private sector varies, and that some owners pay quickly, while others take their time. CATA #11 also affirmed that counties and cities are usually the slowest with payment, but that, unlike in the private sector, companies will eventually get paid. Interviewee #13, a Pakistani male-owned business, echoed that sentiment, and stated that he never has had any problems getting paid by other public agencies. He continued by stating that sometimes he had problems getting paid by prime contractors, but he attributed these problems to the nature of the industry, and that "[b]uilders like to hold on to money as long as they can."

Interviewee #39, a Hispanic male-owned business, did note that every now and then, his company runs into problems getting paid by prime contractors. According to Interviewee #1, a Native American male-owned business, payment by prime contractors is a "mixed bag, sometimes it’s been very difficult.” Interviewee #51, a Hispanic male-owned business, indicated that the “critical issue” is

the delay in payment by/from contractors that are the result of Caltrans' and other public agencies' practices.

CATA #7, a Filipino trade association, indicated that "he has heard complaints from his members that the primes will get paid and not pass the payment onto [the various subcontractors]." This complaint was echoed by Interviewee #54, a Hispanic male-owned business, and Interviewee #69, white male-owned business, who indicated that "primes want to hold onto the money as long as they can, and that sometimes the primes themselves are waiting for dollars to be released." CATA #2, an African American trade association, summarized the general theme of the interviewees statements • "you have to 'stay on [prime contractors]' and do your due diligence, and that '[i]f you stay on them, they'll pay you.'" Interviewee #42, an African American male-owned business, stated that his experience is that prime contractors pay subcontractors slowly or pay as they are paid. Interviewee #42's business situation dictates that he cannot wait very long for payment (because he employs union employees), and he now tells contractors that his company must be guaranteed payroll, as subcontractors are the ones paying for all the materials and labor up front. Since establishing these boundaries, Interviewee #42 usually receives "front money" or is paid weekly.

CATA #10, an Asian American trade association, stated another issue being paid by prime contractors is that subcontractors do not have any leverage. The Interviewee sated that the issue has been presented at many meetings with Caltrans, and that it is even worse for a second or third tier subcontractor. CATA #10 identified that this impacts the performance of the subcontractors and the cash flow of the small firms, which makes it very difficult for them to operate and at some times it has impacted whether the firm can survive or not.

A representative of several DBE organizations stated that "the biggest complain out there in the field is prompt pay … BART and San Francisco Muni .. if a prime doesn't pay a sub in compliance with the federal regulations they simply go down and tell the prime 'We are not paying you.' And that is I think the intent of the regulations." He recalls the old Caltrans system where "when a prime contractor got paid they posted it on a bulletin board in the job house … so the prime couldn't say 'I didn't get paid' … we would like to see that come back. We would like to see Caltrans enforce it." (P.H. Stockton, 3/20/07).

A representative of several DBE organizations stated a public hearing in Stockton that "not one local agency or Caltrans is enforcing prompt pay requirements. We are told they don't want to get involved in disputes between the prime and the subcontractors. Actually, the REIs and the inspectors plan on working for the primes when they retire so they definitely are not going to take the side of the sub against the prime." (P.H. Stockton, 3/20/07)

Denial of payment based upon race.

Only one of the DBE or M/WBE businesses interviewed stated it feels its payment had been delayed or denied due to the company's status as a disadvantaged-, minority-, or female-owned enterprises (Interviewee #31). Otherwise, there were no complaints by the DBEs or M/WBEs of payment being delayed or denied on the basis of race, gender or ethnicity. Interviewee #48, an African American male-owned business, stated that he did not feel that any delays in payment were the result of racism or other discrimination. Interviewee #1,a Native American male-owned firm, echoed that statement, noting that "[h]e does not think his race or ethnicity or the size of his business has been a factor in payment." CATA #1, an Asian American trade association, stated he did not

know if race played a factor in slow payment situations. On the contrary, Interviewee #43, a Native American male-owned business, stated that, "where the racial thing might come into play would be . . . a lot of minority businesses the principals . . . tend to be less sophisticated . . . and are probably more easily taken advantage of."

CATA #3, a Hispanic trade association, stated that he knew of a Hispanic contractor that was forced to file for bankruptcy in the 1990s because he was not paid for work by prime contractors, as well as an [African American] owned firm that had problems getting paid by a prime contractor (on a non-Caltrans job) and had to fight the matter in court for some time. Interviewee #46, an Asian American male-owned business, stated he "did not feel that the slowness of contractors' payment or [an] incident where the company did not get paid was attributable to the company's being a DBE firm . . . '[i]t's just the way the business is.'"

Further, Interviewee #59, an African American male-owned business, stated that, the payment problems affect his bottom line, even though is performance has always been above board. He does not think it has anything to do with his race or ethnicity or the stature of the company as a DBE or a MBE, but that it has more to do with the size of the company – "it's malicious." CATA #10, an African American trade association, male-owned business, stated that he does not know whether race, ethnicity, or gender affect payment, although many times big firms will neglect the needs of smaller firms. The Interviewee stated that he does not know whether this is related to race, but most of the small firms do happen to be ethnic, small DBE firms.

Experiences Regarding DBE Utilization after May 2006

Some firms reported a decline in DBE participation since Caltrans moved to a race gender neutral implementation of the DBE Program. According to Interviewee #7, a white female-owned business, there has been a "great decrease" in the number and frequency of calls the company has received since May 2006. He said that this decrease has impacted the number of jobs and amount of work that the company has been doing for Caltrans. Interviewee #9, a white male-owned business, recognized that he had not been pursuing that many contracts with Caltrans since May 2006, but that he was "glad to see it [Caltrans' DBE contract goals] suspended." He stated also that when the DBE program was in place, he often "scrambled to find . . . the necessary quotas or set asides for various functions."

According to Interviewee #7, the company's phone used to ring "off the hook" with calls from prime contractors requesting bids from them, but now that "there's no DBE participation [goal], the phone doesn't ring." He stated further that since Caltrans ceased using the DBE participation goals, "our phones have stopped ringing on the DBE issue" and "[w]e don't get the calls anymore." The only projects for which the company still gets calls from prime contractors have been federal projects where there is a goal for small businesses and/or businesses located in HUBZones.

Interviewee #27, an African American male-owned business, indicated that the there had been a decrease in the number of solicitations they have been receiving since May of 2006. Interviewee #27 estimated this decrease to be of a magnitude of "about 50%," but she also said that "a lot of those people were just using [them] for good faith purposes anyhow[]" and that they were only getting calls – but not work – from a lot of these firms. According to Interviewee #27, the same firms from whom they were getting work before May 2006 still call and use them. In terms of numbers, Interviewee #27 said that the company got work on only 20% of the jobs for which they were solicited to bid

before May 2006, and Interviewee #27 indicated that the company still lands this same percentage of the work they bid on now, though about half of the firms from whom they used to get calls had stopped calling.

According to Interviewee #32, an Asian American female-owned business, the company still receives the same two or three calls a year that it received before Caltrans suspended its DBE program, but she referred to the DBE solicitation process as "just a name sake" and said, "They just send these forms over that we have to fill out and then turn back in. Then we never hear back from them."

Interviewee #39, a Hispanic male-owned business, stated that, as a result of Caltrans stopping the use of participation goals and the decrease in solicitations from prime contractors, the company has had to be "very proactive [in] trying to locate work." He said that the company had received more work because of its being more active in seeking it, but that this work carried a lower profit margin and that the firm's bottom line had suffered as a result. Interviewee #39 also thought that the company had experienced a decrease in calls asking them to bid on projects for other governments and government agencies because they, like Caltrans, had stopped using DBE participation goals. He stated that the company has experienced an overall decline in the number and frequency of calls they receive from prime contractors soliciting bids. Although the company did not always get the jobs, and sometimes did not even bid on the jobs for which it was solicited, Interviewee #39 feels that the DBE program was good if for no other reason than it allowed DBE firms to get their names out to prime contractors.

Interviewee #18, a Native American male-owned firm, said that since May of 2006, some of the general contractors who used to subcontract the type of work that Interviewee #18 performs, have now hired their own crews to do the work, which eliminates some of the subcontract work that he used to receive. Interviewee #14, a white male-owned firm, estimates that its contracting is modified by 20 to 25% by the DBE program. Since the participation goals were no longer applied, the company has ceased using the 20-25% of subcontractors that is used to hire solely because of the DBE program. About 75 to 80% of its contracting remains unchanged by Caltrans no longer using DBE goals.

According to Interviewee #14, a substantial reason why DBE firms are not likely to be used without the program in place is that they do not tend to refer business to the company like its other subcontractors do, and as it does for prime contractors. Without this mutually beneficial relationship or the requirement of using DBEs, the company is disinclined to work with a subcontractor. Typically, Interviewee #14 uses DBEs for traffic planning, landscaping, electrical, geotechnical, and soils on its projects.

According to Interviewee #46, an Asian American male-owned business, the company would get contacted "at least once a week" to bid on Caltrans projects, but the number of requests for MBEs to bid on Caltrans work "has gone down somewhat . . . probably a lot in the last year or two . . . ."

Interviewee #59, an African American male-owned business, stated that his company does not receive many of these requests anymore, except from contractors with which the company has worked in the past. He thinks that this is directly attributable to the change in the DBE program. Interviewee #59 also has been more aggressive, stating "it's not like they're beating down my door."

Interviewee #67, a white female-owned business, stated the DBE program is a "vital gateway" to prime contractors and thus to work. She added that it took a lot of time and work to get the DBE program established, and "to see it no longer [be] part of good faith . . . ." is indicative of the way the industry to going, and she said that "it's frightening."

Interviewee #17, a white male-owned business, stated further that his company's practices with respect to soliciting bids from DBEs has not changed in the past year, but the firm has not tried to bid a project with Caltrans since the DBE program was suspended. According to Interviewee #17, "DBE isn't the problem . . . Caltrans' hiring practices is [sic] really the problem, in my opinion."

Interviewee #47, a white male-owned business, stated that "[p]reviously [using DBEs] was always a requirement, so we always had DBEs working on the contracts." Now that there is no DBE goal requirement, they have "maintained the DBE subcontractors that they have good working relationships with." They use DBEs in the public and private sector. He has not noticed a decline in the use of DBE subcontractors since the program was suspended. They find subcontractors through previous project experience or occasionally they will ask their clients. They have utilized DBE firms.

Interviewee #69, a white male-owned business, indicated that up until two years ago, primes did try to use DBEs. But there were so many problems with DBEs not being able to complete the work in a satisfactory manner that primes stopped trying to utilize DBEs. Now, the primes just want to use subcontractors who can get the job done.

With respect to his experience with DBEs, Interviewee #45, a white male-owned business, stated there are "very few to solicit." He stated that "[it] has not been a requirement in 2 years. [It] used to be you couldn't get job if didn't have 20% minority." He stated that contractors didn't take the low bidder and sometimes had to take the high bidder to meet the goal. Interviewee #45 stated that now they can take the low bidder "rightfully the way it should be."

According to CATA #1, an Asian American trade association, his business is "very very rare[ly]" solicited to bid on Caltrans contracts. He said that, whether the work is for Caltrans or anyone else (both public and private sector), whether he and others are solicited for bids depends on whether they have a relationship with the prime contractors. He also said that the larger prime contractors often do not provide opportunities for these relationships to develop and that the impetus has to come from elsewhere, and he called Caltrans' mentor/protégé program a "first step" in this area. CATA #1 stated that, since Caltrans had suspended its DBE program, requests by prime contractors for bids had "decreased substantially," and that "race neutral" means "they don't have to use you . . . they can use somebody else." CATA #5, a trade association representing subcontractors, stated that its members have reported that DBE utilization has gone down since the suspension of the goals.

CATA #2, an African American trade association, stated that although his company had not worked under a prime contractor on a Caltrans job since Proposition 209 was passed, generally the frequency with which the Association's members received solicitations to bid on Caltrans projects did not change pre- and post-209. Rather, said CATA #2, the big change in solicitation frequency occurred with local government jobs. However, CATA #2 also said that DBE goals have never been met on Caltrans projects in the post-209 era.

Generally, said CATA #3, a Hispanic trade association, "[t]he fact that you're a DBE doesn't make you any better or any worse," but if a DBE firm has been around for a long time, it is "probably more

sophisticated" because it has a lot of experience dealing with public agencies and government bureaucracy. CATA #3 stated that in the 1990s there were more firms to choose from if one was looking for DBE firms to bid on Caltrans work. Now, he said, it is harder to put teams together, in part due to the passage of Proposition 209 and in part due to economics since Caltrans has not in recent years received as much funding as it did in the past.

CATA #6, a trade association representing heavy engineering contractors, stated that when the goals were in place, prime contactors spent huge amounts of money establishing "good faith efforts" even when everyone acknowledged the goal was impossible. Good faith effort is not a requirement anymore so prime contractors do not do it.

A white female-owned construction business certified as a DBE since 1981 and representative of the Women Construction Owners and Executives testified "when there are no goals, I can tell you that the fax machines stop, the phones stop, and there is no solicitation. After 209, it was just like night and day. The next day I got not faxes, the phone didn't ring, asking for my bid. It was remarkable .. I used to get maybe 20 faxes a day … now I might get three a week." She still does 80% of her work in the public sector but stated "we have to really scrounge to find work." (P.H. San Diego, 3/22/07).

A female-owned consulting firm stated "large primes regularly use our company … to join their team because we are a certified DBE firm, and I have no doubt that many perhaps most of those large primes would make no effort to include small businesses without that subcontractor requirement … it's definitely dropped off in the last year." (P.H. San Diego, 3/22/07).

An African American certified female consulting firm stated at a public hearing "my firm was certified in 1990 and I sincerely believe that I would not have survived in business for the last 16 years had it not been for the existence of the DBE programs and others developed to address the current affects of past discrimination and the more subtle forms that remain ever present today … I believe that San Diego is a poster child for the repeal of Proposition 209 … Many firms have simply gone out of business, particularly those in the construction industry." (P.H. San Diego, 3/22/07).

An Asian American DBE female-owned consulting firm testified at a public hearing that since the suspension of the goals "it's very difficult for us to get contract, to get a subcontract." Before the goals were suspended they were able to get on teams with the primes. Now the primes do not include them. (P.H. Irvine, 3/29/07).

A DBE firm testified at a public hearing that he attended a pre-proposal meeting shortly after Caltrans suspended the goals and "the first thing they said that you do not have to use a DBE firm period. There was no explanation given, nothing. And most of the people around me … said 'Oh what a relief.' That is not a very good thing to say." (P.H. San Jose, 4/4/07).

Interviewee #19, a Hispanic male-owend firm, stated that there are not many DBE contractors working for Caltrans as primes, and that it is of concern to him that Caltrans has recently eliminated the DBE percentage in their contracts. He stated that the DBE program has given the company an opportunity to access the marketplace, be it Caltrans or other public agencies, and the ability to compete with other firms. He has not perceived a difference in business before and after May 2006. Interviewee #19 observes that companies are still using DBEs despite the elimination of a percentage requirement, although they are not able to speculate on why DBE participation still exists.

Interviewee #19 added that it may be harder now for DBEs to obtain work, whereas it was previously easier to obtain the opportunities.

A DBE information technology consulting firm who testified at a public hearing stated that she does ninety-eight percent (98%) of her work in the public sector. She has noticed a gradual decline since the suspension of the goals, but due to her good track record she still receives solicitations. (P.H. Los Angeles, 3/29/07)

A certified DBE, submitting written testimony in connection with the public hearings, stated "The elimination of the race-conscious elements of the Caltrans DBE program will have a severe adverse impact on the availability of opportunities for all M/W/DBE firms to pursue and obtain public sector contracts." (Written testimony submitted 4/12/07).

A certified DBE and MBE, submitting written testimony in connection with the public hearings, stated that after the cessation of the DBE goals, "most viable DBE certified and no-certified companies do not participate because they are unable to compete in the market. . . " He also stated that "most prime contractors solicit in a non-bias form to the whole sub-contracting for all projects; but a good majority of these prime contractors also solicit based on their view of project requirements which sometimes eliminate contract opportunities from subcontractors." (Written testimony submitted 3/20/07).

A small business (presumably a DBE), submitting written testimony in connection with the public hearings, stated his phone "stopped ringing" with bid solicitations since Caltrans went to a race-neutral program (from three to six messages a day to zero). "[N]ow it seems [the "big contractors"] forgot about the DBEs and are back to using the same subs they always use and don't even advertise to anyone else." (Written testimony submitted 3/20/07).

A WBE transportation landscape architect, submitting written testimony, stated that 90% of her work comes from projects with hiring goals. She explained that a large firm can easily do the work in-house and "it is only because of the hiring goals that I am included in the marketplace at all." She stated that when Caltrans first eliminated hiring goals in the 1990's, she lost 80% of her business and it was a "disaster." She stated that she is "treated fairly only because of the hiring goals." (Written testimony submitted 3/19/07). A white female owned consulting firm, stated "there are still people out there who believe and tell us in no uncertain terms that a woman cannot do quality work." (Written testimony submitted 3/26/07).

An "ex-DBE" contractor who testified at a public hearing in San Bernardino stated that he was "forced out of business through the discrimination process of the non-DBE giants of the industry." He explained that he used to receive ample work from the large primes "during 1985 to 1995." But after that time the program became less effective. Before "the reason that these contractors would call us is to meet their DBE requirements … Caltrans or the prime contractors found a way to honor those guidelines." He stated that now that the DBE requirements are no longer in place, DBEs are not utilized. He went bankrupt in 2000. (P. H. San Bernardino, 3/20/07).

Partnerships

All interviewees were asked their experiences with joint ventures and mentor protégé programs. The majority of the businesses interviewed have had no involvement with partnerships, either joint venture or mentor/protégé endeavors. None of the interviewees had participated in a joint venture on a Caltrans project. None of the interviewees participated in a mentor protégé program sponsored by Caltrans.

Joint ventures.

Fourteen (14) of the businesses interviewed had made at least one attempt at participating in a joint venture (Interviewees #2, #5, #9, #14, #16, #23, #34, #45, #47, #48, #56, #59, #61, and #74). However, none of these joint ventures involved work on Caltrans projects. In addition, four (4) trade associations interviewed had either directly been involved with a joint venture or had a member of its association who had joint venture experience (CATA #1, #2, #3, and #5). None of these experiences were on a Caltrans project.

Two of the thirteen (13) businesses attempted to participate in a joint venture but were unsuccessful (Interviewees #2 and #59). One business had been approached about a joint venture but never participated (Interviewee #16). Interviewee #2, an African American male-owned firm, expressed frustration with his experience, stating that he submitted a bid as a DBE partner in a joint venture for a project but the bid was rejected "because of problems with the way in which it was submitted."

Of the ten (10) businesses with experience participating in joint ventures, the joint ventures varied widely in experience. For instance, Interviewee #5, a white female-owned firm, had one joint venture experience working on a county project. Interviewee #9, a white male-owned firm, had a number of joint venture experiences but none with DBEs. Interviewee #16, a white male-owned firm, had joint venture experience with DBEs. Interviewee #47, a white male-owned firm, often worked in joint ventures pairing with minority and non-minority firms. Interviewee #47 stated that joint ventures are an advantage because "it presents a unified team to the client," and normally found partners through previous experience. Interviewee #74, a white male-owned firm, has bid a couple jobs in the public sector as a joint venture paired with a minority firm. He reported that it was a positive experience.

Seven (7) of the businesses disclosed whether their joint venture experience involved public or private contracts. Four (4) businesses were involved in joint ventures for public contracts (Interviewees #2, #5, #23, #74), two (2) businesses were involved with joint ventures of both public and private contracts (Interviewees #47, #48), and one (1) business had only been involved with joint ventures for private contracts (Interviewee #61).

Of the trade associations' involvement with joint ventures, two (2) of them were currently involved in joint ventures with DBEs (CATA #2, #3) and one had a member participating successfully in a joint venture with a large firm (CATA #1). In addition, CATA #1, an Asian American trade association, knew of small women-owned businesses participating in joint ventures with large firms. CATA #3, Hispanic trade association, who is currently participating in a joint venture with another minority business, stated that the experience has been very positive. CATA #3 has no knowledge of any of its members having experiences in joint ventures with non-DBE firms. CATA #5, a trade association representing subcontractors, stated that some of its members have participated in joint

ventures. Picking the right partner is the most important element. You have to get a new license to work as a joint venture. This can be a difficult process.

Mentor protégé.

Almost all of the businesses interviewed have not participated in a mentor/protégé relationship. For those businesses aware of the Caltrans mentor protégé program, the consensus is that it is just getting started.

Interviewee #16, a white male-owned firm, previously participated in a federal Small Business Administration mentor protégé program as a mentor. The two other businesses are enrolled in the Caltrans mentor-protégé program, one as a mentor and one as a protégé. (Interviewees #47 and #57). Interviewee #47, a large white male-owned engineering firm, is very active in a federal mentor protégé program and has mentored smaller minority and female-owned firms to become certified and establish working business models. While Interviewee #47 is enrolled in the Caltrans program, he does not think Caltrans' program is "off the ground yet." Interviewee #57, an Asian American male-owned firm, just recently entered the mentor/protégé program with Caltrans as a protégé and has not received a mentor. He, therefore, had no comments about its effectiveness.

Four (4) of the trade associations had members who had participated in any mentor protégé program. Half expressed that Caltrans mentor/protégé program is very good and can be very successful. (CATA #1, CATA #2). While the program has the potential to be successful, two (2) of the trade associations expressed that success will require a great deal of work. (CATA #2, CATA #3). In addition, CATA #3, a Hispanic trade association, would like to see Caltrans provide statistics showing the impact the program has had on opportunities for DBEs that participate. CATA #1, an Asian American trade association, is a protégé in Caltrans' program and expressed that the program "has been very good." He was among the first to promote Caltrans' mentor/protégé program. CATA #1 and two of its members had received jobs or at least been put on a project team as a result of their involvement with the program. CATA #5, a trade association representing subcontractors, reported that some of its members have participated in the SBA mentor protégé program. She was not aware of whether Caltrans had a program. She thought these programs were helpful.

Interviewee #15, a white male-owned firm, has never heard of either joint venture or mentor/protégé programs at Caltrans but thought they were both great ideas. Interviewee #15 recommended more emphasis be placed on these programs and credit given by Caltrans in the bidding process for bids coming from joint ventures between large companies and DBEs. Interviewee #81, a Hispanic male-owned firm, has no knowledge of formal partnership programs administered by Caltrans, but is aware of informal arrangements in the private sector where prime contractors mentor subcontractors, and help them with bonding and sending work their way. CATA #7, Filipino trade association, is aware of Caltrans' efforts to implement a mentor/protégé program, but has seen no partnerships result thus far.

DBE and 8A company submitting written testimony is involved in the San Diego mentor-protégé program with the AGC and stated there "seems to be some conflict with their participation and their stance on programs . . . [and] there remains a resistance to inclusion and opportunities." (Written testimony submitted 3/26/07).

Anecdotes Regarding the Existence or Non-Existence of Barriers in the Public and Private Sector

Financing, bonding and insurance.

Many DBEs reported that bonding, financing and insurance is a barrier to pursing work in the public and private sectors. Interviewee #26, a white-male owned firm, stated that "bonding is a big barrier," especially in the time since September 11, 2001 because "the bonding industry took a big hit when the twin towers went down . . . ." According to Interviewee #26, bonding companies used to give businesses twenty (20) times their working capital, but now give only five or ten times their working capital. Interviewee #26 relayed one recent experience in February 2007 when he bid on a highway project but could not get a bid bond for the project and thus could not compete for the job. Interviewee #26 thought that his race or gender had never affected his ability to obtain bonding or financing, but he feels his being a white man had negatively impacted his ability to obtain financing or bonding.

CATA #1, an Asian American trade association, said that many of the association's members do not get involved with public sector work because the bonding requirements are too high and unaffordable. This issue is something that CATA #1 said that the Association had raised with Caltrans "for years" but that Caltrans has not been able to address satisfactorily. CATA #11, a minority trade association, said bonding puts restrictions on the amount of work a contractor can receive. If you are a small company and you don't have any property, you might only get a bond for $50,000 so this is the largest project you can receive. Even if you get a job, then you can't bid any more jobs until you finish that job. Caltrans might have a $25 million ramp. If you can't get a bond for that amount, then you have to bid as a subcontractor. Usually the primes won't require the subs to have a bond for work under $50,000 to $100,000, but if it is over this then the subs usually have to provide bonding. He feels that his members ethnicity affects their ability to get bonding because as minorities they don't own a lot of assets and other property. Personal wealth is taken into consideration in getting a bond.

Interviewee #51, a Hispanic male-owned firm, stated that the majority of prime contractors require bonding from subcontractors, especially if the subcontractor is a major subcontractor, but that some prime contractors know subcontractors from their reputations do not require bonding. He said that bonding was a "real problem" and a "very difficult problem" for DBEs. For his business, bonding had not been a problem up until the last few years, when it became an issue because the company "had a couple of jobs that went south" and over which it is litigating right now.

Interviewee #7, a white female-owned firm, stated that the company had a "good relationship" with their bank. However, she did relay an experience where a loan officer was telling her that the bank would not refinance a relatively small loan because their books showed little year-end income, even though the company ran $500,000 in payroll through the bank each year. She was able to get the loan by going to someone higher up in the bank. She also stated that it is difficult for small companies to buy health insurance and noted that the per-employee price they pay for health coverage is higher than that paid by larger firms.

A DBE firm, submitting written testimony in connection with the public hearings, stated that prime contractors "fail to understand that there are certain criteria that they may or may not need to help a DBE with, i.e. insurance and financing. . . . We may not be able to carry certain insurance limits that

are required by the contract or their own insurance requirements. And of course we will not be able to bond the project." He related one example on a Caltrans project in which they stated in the bid they would supply the standard $ 1/2 Million insurance requirement but since it was a large contract, it required the prime contractor to carry a higher insurance limit. He stated they were removed from the contract on the basis that they could not meet the higher insurance limit, "even though those requirements are not for the subcontractor." (Written testimony submitted 4/20/07).

A DBE commercial roofing contractor, submitting written testimony in connection with the public hearings, stated: "We do have difficulty obtaining bonding for public works jobs due to our limited resources." (Written testimony submitted 3/27/07).

A DBE and 8A company, submitting written testimony, stated most DBEs are excluded from multi-million dollar contracts (speaking specifically with respect to water authorities) because of lack of capital and bonding. (Written testimony submitted 3/26/07). A certified DBE and MBE, submitting written testimony, stated bonding, insurance, and available contracts are a barrier to entering the marketplace. (Written testimony submitted 3/20/07). A small business, submitting written testimony, stated as a small business it is difficult to come up with the "cash" necessary for bonding but "the nice thing about working as a sub for these larger construction companies is that some are willing to help with bonding." (Written testimony submitted 3/20/07). A certified female DBE firm, submitting written testimony, stated she has had no problem trying to obtain insurance although she has never worked on a project requiring bonding which "might tell you how far excluded I am from being able to gain entry into some transportation projects." (Written testimony submitted 3/8/07).

A few interviewees reported that their race, ethnicity or gender had affected their ability to obtain financing or bonding. Interviewee #2, an African American male-owned firm, mentioned trouble obtaining financing and bonding for work related to the San Francisco Airport International Terminal project (more than five years ago) and feels that his troubles then were race related.

Interviewee #33, a Hispanic female-owned firm, said that she had not thought about her gender affecting her ability to obtain financing or bonding, but that she would say yes. She continued, "I'd have to have some sort of proof and I don't. I don't have any idea. You sense it sometimes, but I have no proof of that. Hopefully, I'm wrong."

Interviewee #10, an African American male-owned firm, stated that his race affected his ability to get financing and bonding "a long time ago," but that now it has "opened up" so that he does not have any problems. He feels that this was a change that occurred gradually over time.

Interviewee #59, an African American male-owned firm, routinely has problems with financing and bonding. The company does not have the financial wherewithal to get bonding on projects. He wants to emphasize that if it was easier to obtain bonding, then he would expand operations into construction. Because they have not, to date, been able to gain that funding, the company limits its operations to professional services where bonding is not required. He thinks that he has been subject to discrimination on the basis of his race with regard to obtaining financing and bonding.

CATA #1, an Asian American trade association, did not think that there are racial barriers to obtaining bonding or insurance, but said that the association's members have problems with obtaining financing because financial institutions "look at DBE firms more closely for some reason . . . ." CATA #11, a minority trade association, has a member that owns a credit union and he facilitates

most of the financing for the other members. Ability to get financing depends on your credit. He said that if you've been in business for a while, your credit is probably fine. Most young businesses, he stated, have bad credit. He believes race affects his members ability to get financing, especially if their credit is not good.

An white female-owned construction business certified as a DBE since 1981 and representative of the Women Construction Owners and Executives testified at a public hearing in San Diego: "I think minorities and women have a much harder time getting capital, getting bonding and getting insurance … in bonding … women are still asked to have their husbands sign at the bank, which floors me after 33 years" in business. (P.H. San Diego, 3/22/07).

A white female-owned firm, submitting written testimony, stated there is "absolutely not" a level playing field for firms in access to capital, bonding, and insurance. (Written testimony submitted 3/26/07).

Some interviewees feel their status as a DBE helped them in these areas. Interviewee #75, a white male-owned firm, simply cannot afford to bond his work. He feels DBEs are less affected by bonding issues because bond companies have DBE-type goals just like Caltrans. Interviewee #40, a white male-owned firm, knows that DBEs receive special rates on financing and bonding, but she does not have a lot of experience in the area. Interviewee #39, a Hispanic male-owned firm, also indicated that the company's ability to get financing was related to its ability to get steel at competitive prices and stated that the company "wouldn't have been able to get credit at all without the DBE program."

A small DBE information technology consulting firm who testified at the Los Angeles public hearing stated "There are so many good bonding programs out there, but you have to establish a track record … And I don't see that as an issue. I see it as building the business and getting all the right controls and accounting procedures and all those things in place first; that the actual access to money is maybe not the issue." (P.H. Los Angeles, 3/29/07)

Interviewee #39 stated that, with respect to financing, the company "do[es] pretty well by the bank." He said that bonding is "sometimes" a problem because of the company's small size. Interviewee #39 noted that sometimes a prime contractor will waive a bonding requirement for them because they are a small company and a DBE firm. Interviewee #39 said that he could not answer the question of whether the company's being a DBE firm had affected its ability to get bonding and/or financing, as he had been at the company for only two (2) years.

A few interviewees were not sure whether their race affected their ability to obtain bonding, but suspected it might. Interviewee #49, an African American male-owned firm, stated that he did not know whether his race or gender ever affected his ability to get bonding or financing, but that it was something that possibly happened. He said it would be subtle if at all since no one ever said outright that his ability to get bonding or financing was impacted by his being African American.

Interviewee #51, a Hispanic male-owned firm, said that financing is a "tremendous" problem for DBEs, and one that is exacerbated by slowness in payment from government bureaucracies and/or prime contractors. He stated that he could not answer whether his race had ever affected his ability to get bonding or financing, since the person or entity denying a bond is "not going to tell you, 'We are not bonding you because you are of a certain ethnicity or race or color or whatever[]'" but instead will "give a hundred other reasons why they do not give you the bond."

Interviewee #42, an African American male-owned firm, stated he had a lot of difficulty obtaining bonding because the bonding company was "so hard for me to work with" He stated that once he had his credit in order, "the guy he just acted like he didn't really work with us so" he ended up doing his own self-bonding. He did not know whether race, ethnicity or gender affected his ability to obtain financing or bonding. He stated it is difficult because the "bonding people want you to have money in the bank or a lot of capital." He stated that his goal is to be able to self-bond.

Many DBEs did not feel that their race affected financing. Interviewee #3, an Asian American male-owned firm, feels that obtaining financing is a problem for everyone, not just DBEs. Interviewee #3 stated that he had experienced no problems with obtaining financing that he thought were attributable to his race, and stated that some DBEs have trouble getting financing because of their own problems (e.g., they cannot demonstrate capability to do the work). Interviewee #46, an Asian American male-owned firm, stated that financing and bonding were issues that the company has to deal with, but he did not feel that the company had experienced any race-related or race-based barriers to its obtaining financing or bonding. Instead, he said whether a company can get bonding or financing is determined by its financial stability, and just "like everything else, your buying capacity . . . is directly proportional to . . . your financials, and you've got to work your way up . . . ."

Interviewee #48, an Asian American male-owned firm, stated that there were no problems, barriers, or obstacles – based on gender, race, or other considerations – with obtaining financing. Interviewee #27, an African American male-owned firm, believes the company's ability to get financing or bonding had never been affected by his race. Interviewee #25, a Hispanic male-owned firm, stated that it is "not hard" for him to get loans for equipment and other needs since he has "pretty good credit." He did not think that his race or gender had ever affected his ability to get financing. He said that "most of the time I've been approved right away.

Interviewee #7, a white female-owned firm, feels her gender has never affected her ability to obtain financing or bonding. She relayed only one experience where the company had to obtain bonding – a design and build job for the Army Corps of Engineers where the company hired and supervised construction contractors. It had to provide a personal guarantee for this bonding, however, a newer, smaller company (as opposed to someone like them who had been in business for two decades) would "have a hardship in [getting] bonding" and that "for a small company it would be almost impossible unless they do a personal guarantee for the bonding."

Some DBE interviewees reported no trouble with bonding or financing. Interviewee #22, an African American male-owned firm, reported that his firm has had no trouble obtaining financing when it has needed it. Interviewee #23, an Asian American male-owned firm, stated that financing had not been a problem for his business operations. Interviewee #31, an African American female-owned firm, indicated that the company does not have problems obtaining this insurance or financing generally because it has a solid track record that it has established over the past three decades. Interviewee #79, an African American male-owned firm, has not had any issues with financing or bonding. Interviewee #79 has not had any issues with financing or bonding. Interviewee #11, a Native American male-owned firm has not had any problems obtaining financing. Interviewee #54, a Hispanic male-owned firm, stated that he did not have any problems obtaining bonding.

A woman-owned DBE, submitting written testimony in connection with the public hearing, stated: there does not appear to be a problem as to a level playing field for access to capital, bonding, and insurance. (Written testimony submitted 3/14/07).

A business stated in written testimony: he has found no difficulties with capital, bonding, or insurance requirements. "However, this is another area where streamlined access and minimal fees could spur more response to RFQ/RFP opportunities." (Written testimony submitted 3/12/07).

A non-DBE, submitting written testimony, stated: "It is obvious that there is a level playing field with regard to access to capital, bonding, and insurance." (Written testimony submitted 3/16/07).

Many interviewees stated that financing was difficult for smaller companies with less assets and new companies with less history, and not due to race. Interviewee #49, an African American male-owned said that the company has to get bonding for its jobs and that, though bonding was an obstacle at the beginning when the company did not have a track record, it is not a problem now that the company is well established. He said that the same was true with respect to his company obtaining financing.

CATA #2, an African American business trade association, indicated that obtaining financing was not as big an issue for the association's members as is obtaining bonding. He said that if a company has been in business, it generally has a line of credit, but that the difficulty is getting the business experience in the first place and building one's business to the point where (s)he can put up its or other assets to secure financing.

Interviewee #81, a Hispanic male-owned firm, has had issues obtaining financing, but these problems have been those characteristic to small businesses in general and had nothing to do with his race. Interviewee #29, a Hispanic male-owned firm, believes a company needs to have been in business for three (3) years or more in order to satisfy the risk tolerance for banks. He cashed out his 401k in order to finance his business.

Interviewee #54, a Hispanic male-owned firm, reported that the interest on bank loans were high and that he sometimes falls behind on his loan payments because prime contractors and others are late in paying him. But he did not think that his race or gender had ever affected his ability to obtain financing.

CATA #3, a Hispanic trade association, stated that he had had problems obtaining financing in the past and that now that he has sufficient financial resources to obtain loans, he does not have the work opportunities to make taking out these loans worthwhile. CATA #3 said that many young and/or fledgling companies have trouble with financing, and that the federal Department of Transportation's program to guarantee loans through banks was a good program but that it had been "cut back considerably." He also said that banks do not like (to make loans to) businesses with no track record and/or financial history, but that, even though banks are less likely to take risks with people of color, if one has money (s)he can borrow money. Asked if his ability to get financing had been affected by his race, CATA #3 replied that he did not know and that he did not think so, but that perhaps it did in the past.

Initially, Interviewee #2, an African American male-owned firm, had substantial problems with bonding and financing but has overcome these problems through time. He stated that when he started out, banks would not loan him money with his equipment as collateral but instead insisted on a substantial bank balance. He also mentioned trouble obtaining financing and bonding for work related to the recent San Francisco Airport International Terminal Project (more than five years ago)

and feels that his troubles then were race related. However, he stated that his company does not now have any problems with financing or bonding requirements on projects.

Interviewee #8, a Hispanic male-owned firm, stated that "[b]onding is always an issue" and that it is "99% harder on any small business . . . than it would be on a large business." He did not think that any barriers to obtaining bonding or financing were attributable to his firm being a DBE, but instead to the size of his company and having trouble finding someone to put up the money for a bond.

Interviewee #46, an Asian American male-owned firm, stated that financing and bonding were issues that the company has to deal with, but he did not feel that the company had experienced any race-related or race-based barriers to its obtaining financing (which, according to Interviewee #46, the company really does not do) or bonding. Instead, said Interviewee #46, whether a company can get bonding or financing is determined by its financial stability, and just "like everything else, your buying capacity . . . is directly proportional to . . . your financials, and you've got to work your way up."

Interviewee #64, a white male-owned firm, has not performed enough big jobs to get bonded hire than $500,000. He feels this is a "Catch 22." He would like $1 million bonding capacity. He is working his way up slowly – if he can do ten (10) $100,000 jobs per year his capacity will go up.

CATA #6, a trade association representing heavy engineering contractors, said there has been some consolidation of the companies that offer bonds so for a while it was difficult due to the lack of competition. Now it has leveled out and she doesn't hear anyone complaining about not being able to get bonded. Overall, it's not about DBE v. non DBE it is about whether you can afford the bond and whether you qualify for it.

When Interviewee #18, a Native American male-owned firm, started out, it took about two (2) years to build up to the point where it could get bonding and then enough bonding for the projects. The situation is similar for financing. There are two shareholders in the company and at the beginning, they mortgaged their houses or got a second mortgage and used their own money to get started. Now, obtaining financing and bonding is not a problem because the company is very secure and banks compete for the company's business. He does not believe that his ethnicity played a role in the hurdles that he had to face.

Interviewee #42, an African American male-owned firm, stated obtaining financing has “been tough.” He stated he got an SBA loan twenty five (25) years ago and he has not been able to get another direct loan from SBA. He stated you have to have a lot of assets to obtain a loan from a bank and even though his equipment is expensive, it does not appreciate in value.

A small African American owned construction company testified at a public hearing in San Diego that he did not feel there was equal access to capital, bonding, and insurance for DBE firms. He gets excited on jobs where primes offer to assist with bonding and insurance. "I think that certainly more effort needs to be put into the bonding and insurance. We had access to capital. That was not a problem for us, but bonding and insurance was." (P.H. San Diego, 3/22/07).

A representative of BRIDGE, a Native American organization, testified at a public hearing in San Diego that "getting the insurance and bonding … it's almost impossible in a lot of cases to get that. Because I am an Indian contractor … the only way that I can get the work is if I partner with another." (P.H. San Diego, 3/22/07).

Interviewee #1, a Native American male-owned firm, does not need to obtain bonding in his type of business. He has not experienced any barriers in obtaining financing. He stated it is more difficult when you are new. When he first started in the 90's he "couldn't buy a pencil sharpener on credit." Interviewee #2, an African American male-owned firm, had substantial problems with bonding and financing, but has overcome these problems through time. He stated that when he started out, banks would not loan him money with his equipment as collateral, but instead insisted on a substantial bank balance. However, the company does not now have any problems with financing or bonding requirements on projects. Interviewee #21, a Hispanic male-owned firm, is established so it does not have problems obtaining financing or bonding now, but he recalls that it used to be a problem.

Interviewee #6, a white female-owned firm, stated the nature of the business is such that bonding and financing are not something that the company deals with. Interviewee #16, a white male-owned firm, stated "[w]e don't really deal with that too much" because the company is "self-funded and . . . pretty cash flow positive."

Several interviewees reported that Caltrans' new insurance requirements presented a barrier to pursuing work. CATA #6, a trade association representing heavy engineering contractors, stated: "Recently, Caltrans has increased its primary and secondary insurance requirements. This has cost primes a 50% increase in their insurance premiums. Some of these people can't afford that, especially if they don't bid exclusively Caltrans projects." A lot of times the insurance company will require the sub to hold the same level of insurance as the prime. "If a small contractor cannot … meet the insurance requirements, then the prime may not list the sub, especially if it is someone that they don't know. If they've worked with the sub before they may be willing to let him slide and not have the same level of insurance. . . From a prime [contractor's] stand point, if they're not exclusively bidding Caltrans projects they may think twice before paying 50% more for their insurance. From a subs standpoint they may not be able to afford to bid it period." Caltrans provides an exception to the heightened insurance requirements for Small Business Enterprises. She gave a subcontractor the application, but it was too difficult so he did not end up getting certified.

A female DBE consultant testifying at the Stockton public hearing listed insurance requirements as a "stumbling block in all small transit companies in California wanting to do anything with Caltrans or FTA." She noted that "big operators" want "$10 million dollars worth of insurance for a vehicle … we could only get $5 million." (P.H. Stockton, 3/20/07).

Interviewee #33, a Hispanic female-owned firm, stated the company has to carry professional liability insurance for its Caltrans work and all its other work as well. She said that it was "not cheap" and cost them $25,000 a year to carry insurance for $2 million.

Interviewee #4, a Native American male-owned firm, sometimes has to carry air and engineering insurance (a type of liability insurance), but it is on a job-by-job basis (if necessary). He had no problems with obtaining this insurance and did not think that his race affected its obtainment in any way.

CATA #7, a Filipino trade association, believes insurance requirements are overly stringent. He said Caltrans needs to make some sort of reasonable adjustment for projects that are smaller. Right now they require $1 or 2 million worth of insurance for both the sub and the prime on all projects.

CATA #9, an association of consulting, engineering, and land surveying firms, stated his members obtain insurance as opposed to financing or bonding. He stated "that's been another big hit on the consultant community, the smaller firms – the insurance requirements are fairly heavy and it doesn't matter what percentage of work [on the contract] you do. So you may just be doing a small piece of a larger contract, but you still have to carry $5 million in insurance."

CATA #9 stated obtaining insurance is partly based on experience. He stated that even if a consultant is on the team that is selected, the consultant can get up to the point of contract issuance and try to negotiate insurance "they may just say well either you have the insurance or you'll not have the contract any more. You have no recourse as a subconsultant." He stated that he does not know if race, ethnicity, or gender would affect the ability to obtain insurance but if your business is located "in an area that is not the prime real estate, you maybe have a harder time getting the insurance."

CATA #10, an Asian American trade association, stated its members do not obtain bonding, but they do obtain insurance. He stated Caltrans insurance is very high. If the larger firm is doing a $10 million fee and the sub is going to only get $100,000 of the contract, the small firm may still have to obtain the same rate of insurance; if the fee is low, the insurance premium may take most of the profit. This is a barrier. He does not think race, gender, or ethnicity affects the ability to obtain insurance.

A white female-owned construction business certified as a DBE since 1981 and representative of the Women Construction Owners and Executives testified at a public hearing in San Diego that Caltrans recently increased its insurance requirements. She said "my insurance for the year is maybe fifty or a hundred thousand dollars cheaper than if I carry $5 million or $10 million. A small business can't always – even if you have the money to buy it, you can't – they will not give it to you." (P.H. San Diego, 3/22/07).

A Hispanic female-owned consulting firm testified at a public hearing that the insurance requirements on construction contracts are "excessively high." "Due to the contractual 'flow-down' provisions, subcontractors and specialty subcontractors, including DBEs, must meet the same insurance minimum thresholds which are prohibitive based not only of cost as well as history experience." She stated that this is "cost prohibitive." She further testified that contractors are "required to maintain the same level of insurance throughout the life of the project. On a number of contracts which are multiyear … that limits their ability to bid on any other work because they've already used bonding and their insurance on that one project."

An insurance broker, submitting written testimony, stated "I have experienced problems in partnering my construction company clients with large firms performing state work due to their lack of insurance or a desire to exclude them when there is not a requirement or point advantage to doing so. This has been particularly true for the past year. . . [T]he insurance and bonding requirements are so stringent that we are asking that the State purchase master insurance policies, known as Owner Controlled Insurance Programs (OCIP's), by which small contractors are provided buying capacity at discount and charged pro-rata for the coverage. . . Our professional opinion is that OCIP's provide the best opportunity for" DBEs to access insurance. (Written testimony submitted 3/21/07).

Good ole' boy network.

Obstacle to pursing or obtaining business:

A substantial barrier reported by interviewees, both DBE and non-DBE, in obtaining work in the public and private sectors was the perceived inability to "break into the market" due to the pre-existing relationships among prime and subcontractors. In this respect, most interviewees reported the existence of a "good ole' boy network" in the California Transportation industry. Many interviewees viewed this as an obstacle to the pursuing or obtaining work. (Interviewee #6, #7, 8, #10, #29, #31, #32, #33, #39, #43, #44, #51, #52, #57, #61, #65, #66, #70, #79, #85, CATA #1, #2, #3, #5, #6, #8). These interviewees expressed feeling closed out of opportunities because certain prime contractors use subcontractors within their own network and, therefore, do not solicit or accept bids from others. Others either did not believe there was a good ole' boy network or did not see it as an obstacle to receiving work (Interviewees #1, #34, #45, #46, #47, #48, #50, #73). Some interviewees thought the good ole' boy network was more prevalent in the private than the public sector, others thought it occurred in both sectors.

Interviewees reported they are "quite often" (Interviewee #6), "frequently" (Interviewee #8), "quite a bit" (Interviewee #10) and "a lot of times" (Interviewee #51) shut out of a job because the prime contractor already has a preferred subcontractor. Interviewee #17, a white male-owned firm, stated that because of a "good old boys club" the same group of firms get all of the Caltrans work in his area. Interviewee #40, a white male-owned firm, stated that the company is in the "good ole' boy network" because the company "has been around forever." Interviewee #51, a Hispanic male-owned firm, could not say or know whether he was shut out because he was not the prime contractor's buddy or because of any prejudice or discrimination.

Interviewee #7, a white female-owned business, reported that she never received an RFP from certain cities. She stated it was not necessarily because they are a DBE firm, but because they are not "in the good old boy system." She stated that it is hard to maintain relationships with project managers at large prime contractors (in order to get what DBE or small business work is available) because these people often move from one firm to another and those firms already have particular subs in their own network that they use. Interviewee #21, a Hispanic male-owned firm, stated that there is a strong "good old boys" network that is hard to break into. It seems to Interviewee #21 that despite their long established business, there are some jobs that the same companies always receive.

A white female-owned professional services provider in the construction management field testified a public hearing in Los Angeles that "There's still very much an old boy network, I'm sorry to say. And if you're not an old boy, you're not in that network." According to this DBE, "there's a lot of information that you don't get." At the "golf course meetings, the information … flows." She believes the DBE Program "allows us to have an equal playing field." (P.H. Los Angeles, 3/29/07).

Interviewee #70, a white male-owned firm, stated that there is a very strong good old boy network, especially in Eldorado County. "Oh ya, well I worked for Joe before and his job was good to me, we went fishing, so I'll give him this job." He stated that it is not difficult to get into the good ole boy network but if you ever do something wrong it is hard to get back in.

Interviewee #13, a Pakistani male-owned firm, found it "very difficult to break in" and get work from prime contractors on Caltrans projects, mainly because the prime contractors always use the same subs and "don't see any reason of cultivating relationships [with and] providing jobs to new DBE

firms when they got nothing to gain financially in doing that." Interviewee #18, a Native American male-owned firm, stated that certain contractors have certain people they will work with and it is not always price that makes a difference. Interviewee #42, an African American male-owned firm, stated the good ole' boys network "happens all the time."

CATA #9, an association of consulting, engineering, and land surveying firms, stated his members have experience being closed out of an opportunity because of the good ole' boy network and there are "certain primes that subs won't even bother talking to because they know they won't be considered." He stated this happens in both public and private sector. CATA #10, an Asian American trade association, stated that some of the small firms have a good relationship with some larger firms and in that case the larger firms will use those small firms no matter what. Without goals, he believes, primes will use the firms with whom they have the best relationship or who they think will give them the lowest cost.

According to CATA #11, a minority trade association, the primes working for Caltrans have been working for Caltrans for many years. Most of them have bought all their equipment and their own plants. If they need a supplier or a subcontractor they use the same one they have always used so "they don't have to think or worry or try something new." CATA #1, an Asian American trade association, said that it is difficult to get on a Caltrans job as a subcontractor, because you have to know the primes and it takes years to build these relationships. He also said that generally primes already have their teams formed and are not looking for new and different DBE firms.

An African American DBE trucking company who testified at a public hearing in San Diego would like Caltrans to encourage primes to use different DBEs. Caltrans should tell them to "use so many of these guys, just don't put us with all your friends. Because it's a network system out there, and if you're not a part of that network system, you're not going to get it." (P.H. San Diego, 3/22/07).

An African American DBE consulting firm testified at a public hearing in San Diego that the "number one thing" that "puts DBEs at a disadvantage is access to decision makers." The project engineers tell the large prime contractors about opportunities early on "maybe they go out to drinks every once in a while … or see each other on the golf course." (P.H. San Diego, 3/22/07).

A representative of BRIDGE, a Native American organization, testified at a public hearing in San Diego that "As for barriers that I can see for Native American companies … for all disadvantaged companies is to be able to work with the prime contractor for them to really take you serious. Because they have a good ole' boy system, and it doesn't matter if its' a white company, a white woman company, it's still there. And unless you can have a connection with the prime, it's hard to get that work." (P.H. San Diego, 3/22/07).

Interviewee #11, a Native American male-owned firm, is familiar with the "good ole' boy" network, but perceives that it is more of an issue with smaller agencies, e.g., the cities, than Caltrans. These smaller agencies say that it has to do with which companies they are comfortable working. Caltrans is "fairly good about being very stringent in their standards."

A DBE commercial roofing contractor, stated: "We have BEEN treated fairly by most prime contractors we currently have business contact with. (Written testimony submitted 3/27/07).

A woman-owned DBE stated that they do not believe race, gender, or ethnicity is a problem, "[H]owever, I think there is a strong tendency to still lean toward a 'good old boy' network where some vendors are favored over smaller or lesser known vendors who are trying to get established with Caltrans." (Written testimony submitted 3/14/07).

A woman business owner stated, "Attending pre-bid meetings tends to be fruitless. The primes appear to know the firms they will work with before the meetings begin. Their attendance appears to meet a pre-bid requirement only." She stated she was told by a business counselor, and "it is my perception and his too, that it doesn't make sense to call oneself disadvantaged. It is tantamount to calling myself a loser before I even make it out of the gate." (Written testimony submitted 4/15/07).

DBE prime contractors prefer to use DBE subcontractors:

Some DBE firms explained that they were more likely to use their DBE friends as subcontractors on their projects. CATA #11, a minority trade association, reports that his DBE members tend to use DBE subcontractors. "People tend to use people that they are comfortable with." "A DBE contractor would tend to gravitate toward the DBE contractor … they talk the same language, they understand each other's philosophy." Very rarely, he said, would a DBE subcontract to a majority owned contractor.

A white female-owned professional services provider in the construction management field testified at the Los Angeles public hearing and reported "we make every effort to include colleagues or small businesses. And we make an effort to make sure they have work on our team because we know what that's like." (P.H. Los Angeles, 3/29/07).

Interviewee #69, a white male-owned trucking company, stated that there is a network of Hispanic business owners that pass the work to each other. The dispatchers are Hispanic and therefore more likely to call the Hispanic truckers. As a white male, he feels it has been more difficult to get work because of this network.

CATA #2, an African American trade association, indicated that neither he nor his association's members had experience soliciting bids from or utilizing DBEs on Caltrans projects because, he said, they are "almost always" subcontractors on work for Caltrans. He stated that for work for other agencies, the Association's members almost always use other DBE firms as subcontractors (or whoever has the expertise if there is no goal). He also stated that in the private sector his company and other of the association's members try to use other DBE firms if they can but also use non-DBE firms in situations where other DBE firms are unavailable to do the work. He gave as an example his company's using non-DBE firms to haul its products because there are no DBE firms that own trucks to haul the products. According to CATA #2, people like to work with people that look like them and/or with whom they are comfortable. The association's members subcontract work to other DBE or "non-majority" firms, and the association encourages small firms to team and work together because it gives them more financial and equipment strength and thus allows them to land bigger contracts.

Natural and unavoidable:

Some interviewees feel that selecting business partners based on relationships was natural and unavoidable. Interviewee #79, an African American male-owned firm, stated that networks are a fact of life and that people will always want to work with the people with whom they have built relationships. Interviewee #52, a white male-owned firm, stated that being closed out of

opportunities because you are not in a certain network happens "no matter what you do." He also said that he uses the same subcontractors for his work and asked why he (or anyone else) would want to disrupt others' networks. Interviewee #66, a white male-owned firm, said that it "occasionally" happens that he is closed out of an opportunity to work because there is a good ole' boy network in place, but said that "it . . . works both ways too" and he sometime receives work because of a relationship.

Interviewee #46, an Asian American male-owned firm, said that "every contractor has . . . the people that they're comfortable working with." He did not feel that prime contractors chose not to use certain subcontractors because those subcontractors were DBEs but rather because the prime contractor went with someone "in the comfort zone of . . . their own personnel." CATA #7, a Filipino trade association, stated that firms prefer to work with companies with which they have worked in the past, but that once you establish a relationship with the firm, you get more work. He did not believe the network is race-based, but rather relationship based.

Interviewee #45, white male-owned firm, stated that "other than mandatory pre-bids," he did not see a good ole' boy network – "all you have to do is be low bidder and have a bid bond." CATA #6, a trade association representing heavy engineering contractors, stated that contractors, like all people, prefer to use subcontractors that they have worked with in the past, because they know the quality of their work. In his opinion, if there is no significant price difference, they may use the subcontractor they are familiar with. However, if there is a significant price difference, they will go with the low bidder.

CATA #2, an African American trade association, stated that the association's members were often closed out of opportunities to work as subcontractors because prime contractors use someone within their own network. He stated that it is understandable that a company would want to use a firm that it has used before and knows can do good work. The problem, said CATA #2, is that prime contractors' past experiences are almost always with white male-owned firms. The DBE program gives DBE firms a chance to "get into the arena" and show their skills to and develop relationships with prime contractors.

Interviewee #1, a Native American male-owned firm, is familiar with the good ole' boy network but does not believe it affects his ability to obtain or engage in business. When a prime contractor contacts a subcontractor about a Caltrans job, he assumes "that they have some kind of history with a subcontractor." Interviewee #20, an Armenian male-owned firm, heard a friend tell him that he lost a project to white firm because of the “old boy’s network” but the exact reason was unclear. Interviewee #54, a Hispanic male-owned firm, said that he had been closed out of opportunities to work as a subcontractor, not necessarily because a prime contractor used a subcontractor within its own network, but because the big prime contractors "do everything they can in-house." Interviewee #56, a white male-owned firm, stated that the “good ole' boy” network is alive and well in different parts of construction, but not in the industry’s mainstream.

Bid shopping.

Many interviewees reported they had experienced bid shopping by prime contractors. Interviewee #1, a Native American male-owned firm, said he does have a lot of pressure to lower his prices. He said that with the first subcontract he did for Caltrans, the prime contractor "basically said here are the prices, take it or leave it." Interviewee #3, an Asian American male-owned firm, has

experience with and knowledge of bid-shopping, and for this reason got out of the sub-contracting business (because prime contractors would try to shop numbers and beat down prices on the backside).

Interviewee #8, a Hispanic male-owned firm, indicated that bid shopping is something that "happens frequently," usually after prime contractors are awarded a contract. Interviewee #16, a white male-owned firm, stated the company had experiences with bid shopping by prime contractors after a contract had been awarded, but that these experiences had been in other states (in California, Caltrans purchases the product directly from the company).

Interviewee #26, a white male-owned firm, gave a $5,500 sub bid that was the low bid for underground work on a construction project. He called around to other contractors with whom he had bid (but who were not awarded the job) and also called the general contractor who was awarded the job. The prime contractor told Interviewee #26 that he was not chosen as the subcontractor on this contract because the prime needed to meet DBE goals. When he questioned the prime further, he discovered that the prime had told the DBE firm that its bid was not the lowest bid and that they would have to do the job for a lower price if they wanted to actually get the work. According to Interviewee #26, the DBE then lowered its price. Interviewee #26 feels that "too many general contractors are doing bid shopping[]" and that "[t]here's too much incentive there [in the DBE program] for generals to break the law in that area . . . in bid shopping." He indicated that such bid shopping occurred only when prime contractors were trying to meet DBE goals, because generally – i.e., in the private sector – prime contractors do not bid shop because it negatively impacts their reputation with other contractors.

Interviewee #33, a Hispanic female-owned firm, stated that bid shopping was something that "happens a lot," that the company "get[s] cut down sometimes[,]" and that this often happens without the company even being asked. She said that this cutting down usually happens after the prime contractor is awarded the contract or during negotiations. Interviewee #33 also said that there were times when she had "called their bluff" and had the primes tell her they were going to use someone else, only to come back months later saying that they wanted to use her company after all.

Interviewee #34, a white male-owned firm, had no experience with or knowledge of bid shopping. He attributed the lack of bid shopping to the way that services are contracted out in his Caltrans district, saying that typically selections are made on the basis of qualifications and that the actual bid is not prepared until after the firm has already been selected.

Interviewee #49, an African American male-owned firm, said that bid shopping was something that happens, "frequently" particularly on larger jobs and for Caltrans. He also said that because of the practice or threat of bid shopping, firms bidding as subcontractors on larger jobs sometimes are forced to submit bids that are higher than they otherwise would be, since these subs can expect to be bid-shopped by the prime.

Interviewee #81, a Hispanic male-owned firm, feels primes do shop DBE bids around to their construction buddies because there's no way that a big company could undercut his bid without knowing what it was. However, he doesn't feel that DBE bids are being shopped around because of the DBE's race, but rather because the primes get used to working with the same people. The large contractor gets used to working with a large electrical company, and they want to keep it that way.

He's not being passed over for jobs because of his race, but it's just hard to break into these personal relationships companies have built with each other.

CATA #1, an Asian American trade association, stated that he had heard about bid shopping from the association's members but had no personal experience with it. He said that the association had been talking with Caltrans about bid-shopping as well, and that Caltrans had taken a strong stance and made "good progress" in this area. CATA #2, an African American trade association, said that though he had never been bid-shopped, a lot of the association's members had, especially on construction contracts and usually after the prime is awarded the contract (when the primes also try to substitute their subcontractors and tell Caltrans that the sub originally listed did not want to do the work). CATA #2 said that bid-shopping, though it still happens, was a bigger problem in the 1990s than it is today (namely because Caltrans had stopped allowing a 10-day turnaround or review period after awarding its contracts to primes) and was something that the association had addressed with Caltrans through discussions on the Small Business Council.

A Hispanic female-owned consulting firm explained, at a public hearing in Los Angeles, that contractors sometimes bid shop out the DBEs number to "to their own subsidiary companies to bid against DBEs" so that they can "justifiably deny participation" based on price. (P.H. Los Angeles, 4/4/07).

Bid manipulation/different bid criteria.

Very few interviewees reported they had experienced bid manipulation. Some interviewees had heard of the practice but had no personal experience. Interviewee #5, a white female-owned firm, stated that he knows of bid manipulation, but that he did not know who was engaged in this practice. Interviewee #21, a Hispanic male-owned firm, has heard of bid manipulation but stated that his firm has no personal experience with it.

Interviewee #33, a Hispanic female-owned firm, described a situation where her company submitted two RFPs on a job (she did not know if Caltrans funding was involved), one for urban design and streetscape. She feels that her company had the best chance of getting the streetscape job, since it had won the previous streetscape job four years earlier. But, according to Interviewee #33, the two proposals were combined after they had been submitted separately, and the company did not get the streetscape job. Interviewee #33 said that had she known the two proposals would be combined, she would have pursued a different strategy.

Interviewee #46, an Asian American male-owned firm, relayed an experience where his company bid as a prime but then lost the bid and was given as the reason that the company had not correctly satisfied the job's DBE requirement. Interviewee #46 stated that this job was then re-bid, but he did not know whether or not the awarding of the job to his firm was protested only so that the job could be re-bid. Interviewee #46 did say that it was a common practice for agencies and districts to re-bid their jobs "multiple times just to get the price down." He did not think that this re-bidding had anything to do with "the minority status or requirements[,]" but that it is "just their technique." He also stated that he had "[n]o proof on it [this practice of re-bidding,]" but did feel "that's what they do all the time."

Interviewee #54, a Hispanic male-owned firm, relayed an experience about two years ago on a private sector job in Tracy, California where there was attempted bid manipulation, and they said that this was something that had happened to them "a couple of times." Interviewee #5, a white female-owned firm, believes it experienced bid manipulation on a recent project where the specifications for the project were not clear. Interviewee #5 made some suggestions about the materials, and the company requesting the bid incorporated the suggestions to save money, and then re-bid the project. Interviewee #5 did not receive the work on the second bid.

Interviewee #65, a white male-owned firm, has knowledge of bid manipulation/kickbacks, especially on Caltrans work where brokers and truckers have been involved.

CATA #1, an Asian American trade association, said that bid manipulation was not so much a problem compared to prime contractors wanting to substitute their subcontractors after being awarded a contract. CATA #1 said that the association had addressed this issue with Caltrans for the past decade, and that though Caltrans had made efforts and "some progress" to mitigate this problem, there is "still a long way to go."

A small African American owned construction company located in Chula Vista testified at a public hearing in San Diego, that two years ago he attempted get a contract on the South Bay toll road. The DBE requirement was in the double digits. Over the holiday, he put a team together, which included the required number of DBEs, and prepared the bid. When the solicitation came out the requirements had changed. He had to put a whole new team together. The company was not ultimately selected. He stated that the bid was not opened like it normally is but rather, he had to inquire as to whether he got the job. "After being treated the way we were treated in the bid, after them knowing that we were going to be bidding on it and then changing the specifications, and the specifications were changed to that extent that – that you – it was – it was very difficult." (P.H. San Diego, 3/22/07).

A DBE firm, submitting written testimony in connection with the public hearings, stated "while all prime contractors are required to solicit DBE [participation] there is no requirement for them to use us. I have been bid peddled and/or underbid by fractions of a percentage and then all the prime has to say is, we tried, but could not make the program work." He stated that on several projects, "even though we were asked to bid a project, and we were either low or within [$]1,000.00 of the low bid (possible bid peddling) we are not listed as the sub-contractor." (Written testimony submitted 4/20/07).

Fronts.

Only a few interviewees reported direct knowledge of "fronts." Most interviewees reported no knowledge of "fronts." Some of these interviewees stated that while they had no direct knowledge, they suspected that they occurred.

Interviewee #3, an Asian American male-owned business, noted that he believes he is one of the few DBEs in California that is “legit,” and that may DBEs are getting a “pass” simply because they are certified as such.

A large general contractor at a public hearing in Eureka stated that "there are a lot of illegitimate [DBEs] that are – almost every bid that we're preparing, I will get a phone call from somebody claiming to be a DBE, who just wants to know how much money I want to pass through for a markup of five percent." (P.H Eureka, 1/23/07) Interviewee #43 was solicited to be a front about six (6) months ago.

Interviewee #4 believes that fronts will exist in any program that is DBE- or minority-based, but that it is probably more prevalent in construction work than in consulting. CATA #7 believes it is hard to monitor in the consulting realm since the president does not need to be the architect or engineer. Companies can put up a minority president who has very little control.

Interviewee #75, white male-owned firm, has seen WBE and MBE shams. Some so-called "women" owned businesses are in fact fully operated by the husband or two (2) friends decide to put the business in her name and file for certification with the understanding that the female friend will take no part in the business. Another example is where two individuals join in an informal partnership in which the minority will file for certification and the white man will be the actual person in charge. According to Interviewee #75, everyone knows this sort of thing happens, and that it happens a lot.

A non-DBE, submitting written testimony, stated there is a DBE company and the owner owns multiple companies, and he questions their authenticity as a DBE/qualified 8A. (Written testimony submitted 4/4/07).

Some viewed fronts as undermining the DBE program. Interviewee #14, a white male-owned firm, feels that DBE-fronts were very common and cited it as one of the main reasons why the Program was not terribly worthwhile. He believes many of these companies have gone out of business since the suspension of the goals as their sole reason for existing was to take advantage of the DBE Program.

Interviewee #29, a Hispanic male-owned firm, said that fronts injure the DBE Program. And that because of fronts prime contractors may question whether he is also a "sham." He stated that in California, the "responsible managing employee" designation allows this to happen because it allows companies to use other companies' licenses to bid on work.

Some interviewees thought Caltrans did an adequate job policing for fronts and saw the existence of fronts declining. Interviewee #51, a Hispanic male-owned firm, stated that there were "a lot" of DBE fronts at the beginning of Caltrans' DBE Program and certification process, but that Caltrans had done a "very good job of investigating those people" and now does a better job of policing DBE fronts.

CATA #1, an Asian American trade association, encountered fronts "quite a bit" in the past, especially in the construction field. He gave an example of concrete mixture firms that would set up DBE firms to get their subcontracts and that would use these DBE subs as brokers to get supplies. He thought that the government had cracked down "quite strongly" on DBE fronts, but he said that they still surface. CATA #2, an African American trade association, said DBE fronts were more common in the 1990s than today, and thought the practice had gone more underground since then (in part because some people in San Diego went to jail over this).

Interviewee #75, white male-owned firm, does not believe that Caltrans, or any state agency, can prevent sham DBEs. He stated that the state has no formal mechanism by which they can verify that

the individual requesting certification will be an active leader of the company. However, Interviewee #75 believes that it the end it does not matter since the only time DBE status is going to help is when the bids are close, which is not often. Interviewee #75 doesn't think there is any formal reporting mechanism for DBE shams and questioned whether they were even against the law. Interviewee #76 does not believe fronts have been a problem in the last five (5) years, and since the suspension of the goals he says there is no real money in the schemes.

Many interviewees reported that female fronts are more common than minority fronts and that these fronts most often occur in the context of an owner putting the business in his wife's name. Interviewee #6, a white female-owned firm, said that he knew of DBE 'fronts' (several of them large companies) where wives were given 51% or more ownership of a company that their husbands actually owned and ran. Interviewee #26, a white male-owned firm, said "too many guys were just giving their wives an extra 2% [ownership share]. You know it just wasn't working the way they wanted it to." Interviewee #31, an
African American female-owned firm, said it is not at all uncommon to go to meetings with WBEs and "never see the woman." Interviewee #33, a Hispanic female-owned firm, knew of "a couple of women owned businesses where the woman is not really involved."

Some interviewees had knowledge of minority fronts. A DBE firm at a Stockton public hearing knew of an African American front "they had a driver, which was African American, that was driving for them and they sold him a truck and they put all the work under his name . . . . I am planning to go in there and get him decertified." (P.H. Stockton, 3/20/07). Interviewee #26. a white male-owned firm, stated that DBE fronts were "rampant." According to Interviewee #26, "there were a lot of people who brought in partners just . . . [so] they . . . could get their company to meet the goals of [the DBE program]," and "they looked like . . . 51% owners, but in reality they weren't." With regard to businesses owned (or at least nominally owned) by persons of color, Interviewee #26 stated that he knew "too many people that suddenly became general engineering contractors because some big corporation took them under their arm and said, 'Hey, you're going to be our minority.'" He spoke of one contractor that participated in such an arrangement but was "really . . . just an employee of theirs [the corporation] so that they could meet the [DBE] goals all the time without putting in all the work to meet the goals." He indicated that the contractor, under this arrangement, received a share of the profits that was lower than that of his share of the ownership. He also described arrangements under which persons of color were brought into larger firm for a period of five (5) years to learn the business, but with the understanding that after these five (5) years they would start their own firm that would be a DBE that worked closely with that larger firm in order to satisfy its DBE goals.

Interviewee #69, a white male-owned firm, reported that non-certified companies will take racial minority employees, help them start their own company, and get them certified. The newly certified DBE will use the non-certified company's equipment, manpower, etc., and in return the non-certified company gets to bid jobs as a DBE. The two companies split the money. He says minority status automatically gets you more money. CATA #3, a Hispanic trade association, said "I think they're around . . . ." He said some DBE fronts eventually become legitimate, meaning, for example, that the person who nominally runs a business actually learns it. "We wonder sometimes about certain ones, but it's hard to know. It's really up to the agencies to do their homework."

A white male-owned construction business stated, at a public hearing in Redding, "when the DBE program was getting started there were so many scams being set up about, well, you just send us the

bill and we'll buy the pipe, not doing anything other than processing paper … we need to do whatever we can to avoid that occurrence." (P.H. Redding, 3/29/07).

An African American male-owned small printing business stated, at a public hearing in Los Angeles, "if you go back 15 years ago … most of the small business in this country … were managed, owned, operated by men. If you fast-forward … today those businesses are run by women … in most cases … women are the wives of the men that ran them before." (P.H. Los Angeles, 4/4/07).

False reporting.

Very few interviewees reported they had experienced or heard of false DBE reporting by prime contractors. Very few interviewees reported any knowledge of this practice. Interviewee #40, a white male-owned firm, thought it would be difficult to get away with false reporting on a public works contract. Interviewee #33, a Hispanic female-owned firm, had no knowledge of false reported stating "[y]ou don't question that."

Interviewee #42, an African American male-owned firm, stated that "[t]hey have been coming down hard on licensed contractors out here so that really hasn't [happened any] more to me." CATA #10, an Asian American trade association, stated his firm has been named as a subcontractor on a contract but after the prime is awarded the contract they do not hear anything. That happened pre-Caltrans race-neutral program.

Anecdotes Regarding Race, Ethnicity, and Gender

Perceptions regarding whether race, ethnicity and gender affects ability to engage in business in the California transportation industry.

Negative effect:

Few minority or female-owned businesses feel that race, ethnicity, and/or gender negatively affected their ability to obtain or engage in business. CATA #1, an Asian American trade association, stated that there are "serious" but subtle personal barriers to getting work in both the private and public sectors and with all public agencies. These barriers were not obvious but instead existed deep in people's minds and hearts. According to CATA #1, the problem is not so much that people do not like DBEs, but that non-DBE firms do not trust DBE firms because they do not know them. Interviewee #44, a Middle-Eastern male-owned firm, feels there are barriers to pursuing work that he believes are due to his race. He has not experienced blatant discrimination, but he hears things like "we need someone with more experience" or what he views as other "sham" excuses. He feels that frequent change orders may be related to his race. He never files complaints because he cannot afford an attorney.

Interviewee #7, the Hispanic co-owner of a white female-owned firm, believes race affects his ability to engage in business in that he does not receive certain RFPs. Interviewee #7 spoke of the attitudes of some of the older engineers at Caltrans who were hesitant to accept women and people of color coming to work as Caltrans engineers. Interviewee #7, the white female-owner, stated that one time while working on Caltrans project an engineer put a hand in front of her face when she was trying to explain something to the Caltrans project manager. Interviewee #7 feels that things would change "once this kind of generation is gone" and more Hispanic and Asian engineers filled the ranks at Caltrans.

CATA #5, a trade association representing subcontractors, stated: "A lot of times the disadvantaged contractors or minority contractors may not have had the benefit...the construction industry is primarily white males from 30 to 60. Lots of things get done with back slapping and who knows who and if you are not in that group then you mind as well not come to the party." Contractors prefer to work with their "friends." She believes Caltrans could encourage contractors to use DBEs by reinstituting the mandatory goals. "Price is a very strong drive…but if [a minority owned firm and a majority owned firm] had the same price they would go with the person they felt comfortable with."

Interviewee #36, an African American male-owned firm, feels that there is definitely racism amongst general contractors but that the easiest way to deal with the problem is not to work with racists. He seemed confident that there were enough non-discriminatory general contractors out there to provide ample business opportunities for him.

A minority owned business who submitted written testimony stated "because of racial and ethnic discrimination [our company] has been excluded from many private sector opportunities. We believe that the reason for this disparity is complex, rooted in historic and contemporary inequities." (Written testimony submitted 3/17/07).

A female certified DBE firm submitting written testimony stated "there are not just difficulties in bidding projects as primes and subs, it is to the point where nothing short of an outright set-aside contract in conjunction with litigation is going to change the mindset and negative attitudes of the staff working in the transportation industry." She stated that "based upon my gender or status as a certified DBE firm, however you want to put it, we are treated like an old shoe that 'should not be at the table' and 'would not be at the table' if there wasn't a goal to meet or a client who specifically requested us." She stated "no one is going to give a woman a large transportation project." (Written testimony submitted 3/8/07).

CATA #11, a minority trade association, believes his race affects his ability to obtain or engage in business. "It happened yesterday … when I walk on a job site everyone wants to know what I'm doing there … if an older white guys walks onto a job he could walk all the way through it and no one would ask him anything … but once you get there and they know who you are then they aren't going to say that." "It's just human nature … they already have an idea about certain people … you have to go in there and prove yourself right off the bat … show them you have some credibility and talk with some sort of sense and it gets smoothed over a lot."

Interviewee #70, a white male-owned firm, has heard people make comments about foreigners coming here and working for less and getting better benefits than people who were raised here.

A white female-owned construction business certified as a DBE since 1981 and representative of the Women Construction Owners and Executives testified at a public hearing in San Diego "if you ask the question is there discrimination, I have to say yes, yes, yes. There is many, many difficulties and barriers to women and minorities. And I have to tell you that without any race-conscious measures, government agencies experience sharp declines in participation … when there is no goals on projects, it reverts back to the good ole' boy group that's always been there." She further testified "construction is a traditionally male-dominated field, and we have had to climb many walls." (P.H. San Diego, 3/22/07).

A WBE, submitting written testimony, stated that she worked for a competitor in San Diego for sixteen (16) years and the new owner told her they "didn't want a woman in Management [because] they thought contractors like to deal with men, point blank." She stated that she thought if she sued she was "sure if I did I would never work in construction again." (Written testimony submitted 1/26/06).

A Hispanic woman-owned engineering firm, stated that without a DBE or similar program, DBEs do not have a chance to participate in State contracts. She went on to say, "Discrimination still exists in the heart and, thus, hard to prove, but I assure you, discrimination remains ALIVE AND WELL." (Written testimony submitted 3/8/07).

A certified DBE, submitting written testimony, stated "Although discriminatory practices are prevalent in the contracting industry, it is practically impossible to prove that the discrimination is based solely on considerations of race, ethnicity, and/or gender." (Written testimony submitted 4/12/07).

Some white male-owned firms feel that their race negatively affected their ability to engage in business. Interviewee #65, a white male-owned firm, believes that his race has affected his ability to engage in work with Caltrans. He feels that he has been intentionally discriminated against, especially when the trucking brokers came on board. Because there were not many white workers in his industry when he was doing Caltrans work, he was looked down on and treated as though he was a minority. He thinks he is passed over by prime contractors who are looking for DBEs to fill a quota. As to other agencies and in the private sector, he does not think that he has been discriminated against on the basis of his race. Interviewee #26, a white male-owned engineering contractor, discussed an experience he had in 1991 when Caltrans awarded a job in Humboldt County to a DBE firm whose bid was higher than his ($42,000 compared to $28,000).

Interviewee #26 feels that the award was "shocking" and "ridiculous." He called Caltrans to explain that he was unable to find certified subcontractors in Humbolt County and that he, as a taxpayer, did not think "that people are going to want to be paying an extra two or three thousand dollars for two guys to come up from Sacramento" to do the job. He recalls that the person at Caltrans told him that "if people don't meet goals, they don't try hard enough." He stated that he could "tell by the way . . . [he] was talking and . . . by his voice and different things that [he] . . . was a minority." Interviewee #26 stated that this experience "put a sour taste in [his] mouth about the [DBE] program[,]" and that it was "one of the big reasons why [he] stopped bidding [Caltrans'] jobs . . . ."

Some of these non-DBE firms feel they have lost work to DBEs. A non-DBE submitting written testimony stated it receives less work (starting in the 1990's) due to the 8A program and minority set-asides. (Written testimony submitted 4/4/07). Interviewee #55, a white male-owned firm, stated that, "if [his] company wants to do a public works project . . . [he's] going to take that opportunity to a minority business and [he's] going to partner with that minority business because [he] knows at that point [he's] going to have a better chance if it's one [he] really wants, and that's unfortunate because that adds . . . a whole other layer of administration expenses." Interviewee #34 said, "I may be able to think of some instance where our biologists weren't used because they had to use biologists from a DBE firm, but I can't think of any examples. I mean, I think you'd be hard pressed to say that you're at a disadvantage for being Anglo-Saxon."

No effect:

Some minority and female-owned businesses did not feel that race or gender affected their ability to engage in business (Interviewees #1, #4, #6, #11, #20, #27, #29, #35, #42, #48, #54, #61, #81, CATA #7). CATA #7, a Filipino trade association, believes DBEs are able to compete fairly with small non-DBE businesses, but not large non-DBE or DBE businesses. Interviewee #3, an Asian American male-owned firm, stated that his race had never affected his ability to obtain or engage in business, either with Caltrans, prime contractors, other public agencies, or in the private sector. While he is sure that "discrimination" happens, he simply refuses to work for or with those people.

Interviewee #4, a Native American male-owned business, has been working in the construction industry since he was 16 years old. He feels that others in the industry have been very helpful in assisting him set up his business and make it successful. He thinks he may have received this help *because* he is a Native American, but stated it might be different for people trying to get a footing in the industry today. Interviewee #1, another Native American male-owned firm, does not think his race affects his ability to obtain or engage in business. He stated he thinks his gender may be an advantage "although it's hard to say for sure, but I would assume some advantage," however, he feels it is probably limited to the private sector.

Interviewee #6, a white female-owned firm, does not feel her gender has affected her ability to engage in business. Interviewee #67, a white female-owned firm, said that, though she worked in a male-dominated field, she did not ever feel discriminated against. Interviewee #32, an Asian American female-owned company, did not believe her race or gender affected her ability to obtain or engage in business in either sector.

Interviewee #27, an African American male-owned firm, stated that his race had never affected his ability to get work from Caltrans or anyone else, either in the public or private sector. He did not feel he had ever been closed out of an opportunity to be a subcontractor on a job because of a good ole' boy network. According to Interviewee #27, he and his company have been "treated pretty fairly." Interviewee #79, another African American male-owned firm, does not feel his race has affected his ability to obtain work in the transportation industry. He noted that he has a very "white" sounding name and thinks this makes a difference in his attempts to secure contracts. However, a prime has never refused to work with him simply because he is African American.

Interviewee #29, a Hispanic male-owned firm, does not believe that his race has affected his ability to obtain business, but stated that his biggest hurdle is being an unknown. A small minority company submitting written testimony stated that business is fine and that 90% of his work is in public works with 60% of that as a general or prime contractor. (Written testimony submitted 3/12/07).

Although Interviewee #18, a Native American male-owned firm, does not believe that ethnicity or gender affected his ability to engage in business with Caltrans or with other public agencies, the language barrier has been a problem with some subcontractors which he was able to work through.

A minority owned firm submitting written testimony stated that "having provided supplier services to DOT, Caltrans on several limited-content training contracts, I have found no evidence of having been treated unfairly based on race, ethnicity, or gender." (Written testimony submitted 3/12/07). Interviewee #13, a Pakistani male-owned firm, stated that he had never been discriminated against because of his ethnicity, and that he had never benefited from the fact that he is a Pakistani.

An African American male-owned small printing business testified, at a public hearing in Los Angeles, that "the discrimination that continues today has nothing to do with race. It may very well have something to do with gender. I do think that women have an unfair advantage in this process" due to female fronts. He went on to state "I don't believe there's a lot of racism existing in these programs anymore … we got rid of the racist system, and now we've got a system of cronyism. And all of us are not cronies." (P.H. Los Angeles, 4/4/07).

Positive effect:

Some minority firms feel that their race helped them get business (Interviewees #19, #46). Interviewee #19, a Hispanic male-owned firm certified as a DBE with Caltrans, stated that he has not seen any direct correlation between his race and his ability to obtain business. He is sure that it is a factor, however "it works both ways." He named his company with his surname so that it is apparent that the company is minority-owned. He does not know of any companies that have not called him because of it, but if that is the case then it just "weeds out" calls that will not result in jobs. He believes he has received calls from people who have felt more comfortable dealing with him and probably called him because of the name of the company. Interviewee #46, an Asian American male-owned firm, did not think that his race had ever negatively affected his ability to obtain or engage in business with Caltrans or anyone else. In fact, said Interviewee #46, "it's been just the opposite to be honest with you" because if there is a DBE requirement on Caltrans or other work, DBE firms are sought out for work.

A Native American DBE, stated "The greatest strength of this [DBE] program is the education that is available to all qualifying participants." (Written testimony submitted 3/20/07).

Not sure:

Some minority or female-owned business were "not sure" whether their race, ethnicity, and/or gender affected their ability to engage in business, but suspected it had some impact. Interviewee #2, an African American male-owned firm, stated that when he started out in 1963 his race was definitely an issue, but that today it is not. He said that when he started out, he felt that he had to be better than the next guy in order to compensate for his race. But since he has managed to excel at his work, race had not been an issue. He said that he felt that his business connections were sufficient to generate work for the company and that people remembered him and solicited him based on the high quality of his work and excellent reputation of the business. However, for those just starting out, he was not so sure that race would not be a factor, even today.

CATA #3, a Hispanic trade association, said it was "hard to say" whether or not race or gender had ever affected his members' ability to get work. He stated that Hispanics were not well represented in Caltrans work, and that District 7 should focus on bringing in more Hispanics, both internally within Caltrans administration and staff and in Caltrans contracting and procurement practices, especially in the professional services arena. CATA #3 did not feel "militant enough" to press this issue with Caltrans or the District Director and that, outside of the above, he did not know about race affecting his members' ability to get business.

Interviewee #31, an African American female-owned firm, answered, "I would never know that … things are really subtle now, and it is not overt anymore. It is pretty much you go into a meeting and you can kind of tell by body language whether you're going to be accepted or not. Our biggest

problem is getting our foot in the door, because once we get our foot in the door and we can show that we do a good job, then it is a marketing issue. But getting the foot in the door is tough."

Interviewee #51, a Hispanic male-owned firm, stated that he could not answer whether his race had ever affected his ability to get work with Caltrans or anyone else. He said that, "hell yes," there is prejudice in the world and that "anybody that thought there is not is lying . . . ." but that he could not answer whether this prejudice had affected him, and he chooses to believe that it has not. Interviewee #51 stated that it was difficult for anyone to break into the California transportation industry, especially minorities.

Interviewee #5, a white female-owned business, stated that gender had affected her ability to engage in business with Caltrans because she was de-certified in the 1990s. She did not feel that gender affected her ability to engage in business with prime contractors, with other agencies, or in the private sector.

When asked whether his race affected his ability to get in business, Interviewee #25, a Hispanic male-owned firm, replied "maybe some," but he also said that he has not had any problems because people had been giving him work whenever they needed him. Instead, according to Interviewee #25, when the brokers for whom he works "stop the work, it is because the work has slowed down."

Interviewee #58, a white female-owned firm, thinks that gender has been a little bit of an issue with some of the businesses, particularly with the “good ole' boy” network.

Differences between public and private sectors:

Some minority and female-owned business feel that race or gender did not affect their ability to engage in business in the public sector but did affect their ability to engage in business in the private sector. Both Interviewees #10 and #49, African American male-owned firms, stated that their race had never affected their ability to get business from Caltrans or other agencies, but that it had affected their ability to get work from prime contractors – mostly in the private sector. Interviewee #58, a white female-owned business and Interviewee #60, an Asian American male-owned firm, stated the same. Interviewee #49, an African American male-owned firm, attributed this "discrimination" at least in part to there being so few African American contractors in the California transportation industry, stating that "because they do not see a lot of African Americans out there in the industry, . . . they do not have a way to gain confidence."

Similarly, Interviewee #57, an Asian American male-owned firm, did not think his race affected his ability to obtain/engage in business with Caltrans, but with prime contractors, he thinks his ethnicity has been a barrier to receiving work. Interviewee #57 stated that he has not worked with many other public agencies or in the private sector so his knowledge is limited. Interviewee #59, an African American male-owned firm, believes that race has affected his ability to obtain/engage in business with Caltrans and other public agencies because the primes working in the public sector already have the subcontractors that they prefer to use. While government agencies have not discriminated against the company, the primes on these projects have. Interviewee #59 stated that some primes feel that the DBE program is a "handicap" for them.

CATA #2, an African American trade association, said that he did not think that race had affected his members' ability to get work with Caltrans, but that it had affected their ability to get work for prime contractors and in the private sector. He also said that his race had affected his company's ability to

get business with local governments whose agencies and the contractors they hire "take on the flavor" of the local city or county. For example, said CATA #2, the City of Pasadena does not award many contracts to firms owned by people of color. He said that this latter issue was "still pervasive."

CATA #9, an association of consulting, engineering, and land surveying firms, "think[s] there [are] some issues" at the selection process stage and that gender is one of these issues. He stated that "it appears there has been some impact [with race, gender, and ethnicity] on the selection of some consultants" with respect to prime contractors. He stated with respect to non-Caltrans public agencies, it depends on where the agency is located. In the north where he is located, "it's different pockets where it's a bigger issue than others." He stated in the private sector, "it's not an issue in the selection if you are a DBE or not. Although I think gender is more of an issue in the private sector than in the public sector."

Perceptions regarding the work environment for minorities and females in the California transportation industry.

All firms were asked their opinion as to the work environment for minorities and females in the California transportation industry.[14]

Some white male-owned firms viewed the industry as open and accepting. Interviewee #9, a white male-owned company said "I think it's unlimited" and "I don't see any barriers for any race, creed, color, or ethnic barriers in the [engineering] profession." Interviewee #52, a white male-owned engineering firm, stated "I don't know of any problems." Interviewee #56, a white male-owned firm, said that the work environment for DBEs is “good. Just as good as it is for anybody else.” Interviewee #47, a white male-owned firm, sees the work environment on the professional side as good for women and minorities and stated that these groups are receiving work and respect in the community.

Interviewee #14, a white male-owned company, pointed to the multi-ethnic and gendered composition of its own company as evidence that racial and gender discrimination is no longer an issue. Interviewee #14 expressed frustration that the DBE program gave no credit to large firms that hire many minorities and women. Asked to describe the work environment for DBEs, women, and minorities in the California transportation industry, Interviewee #17, a white male-owned firm, said "I think the field is so wide open now, the sky's the limit with anybody that wants to work in this business. If they're bright and they want to work hard, the sky's the limit. There's no limitation on a woman or any minority that I know of, certainly not in my firm." Interviewee #17 stated also that he had never experienced any stereotyping, offensive comments, discrimination, sexual harassment, or complaints about other offensive behavior in the California transportation industry.

Interviewee #26, a white male-owned firm, "Well I'd say there's better opportunities for [minorities] than [for] most white males. So I feel like there's opportunities for everybody." He stated that he had "heard racial comments on a project like twice in thirty-five years," one being a racial slur he heard at his father's construction site when he was a kid and the other being when one of his own employees "said something one time" and he said, "Hey, no . . . don't even . . . . I don't ever want to hear you talk that way again if you want your job."

[14] Several firms declined to answer because they felt they did not know.

Interviewee #34, a white male-owned firm in business for 70 years, stated that he had seen things change over the course of his career to the point where now he did not see "any appreciable difference in the treatment of minority or female contractors or staff at all." He stated also that "a high level of diversity in transportation work is just a given now," but also noted that "that's a product of where we are [Southern California]," indicating that things might be different in other geographic areas. Interviewee #34 said that his company, being a company of 1500 people, sometimes has to deal with complaints about sexual harassment, discrimination, and other offensive behavior or comments internally, but he thought that this was "probably the same as it is with any industry" and said that the company is "very proactive about maintaining . . . [a] diverse, tolerant work environment."

Interviewee #66, a white male-owned firm, replied that it "seems like sometimes [DBEs] have a little advantage" but also that he could not "really comment too much on that" and that he "d[id]n't really know." He stated that women drivers in his business were sometimes looked down upon because people think that truck driving is a man's job. Interviewee #40, a white male-owned firm indicated that there is little trouble for women and minorities in the industry.

Interviewee #15, a white male-owned firm, stated that his company was actively involved in promoting female engineers, that they were unusual in having a gender balance, and that they were involved in the Bay Area women's engineering organizations. Interviewee #75, a white male-owned firm, believes that DBEs are treated no different than non-DBEs, except for the preference DBEs are afforded upfront. After that, everyone is treated the same.

A non-DBE felt that discrimination in California is minimal. A non-DBE, stated "I have been treated fairly based on race, ethnicity, and gender. . . Any suggestion that any significant amount of active discrimination exists in California in 2007 is silly." (Written testimony submitted 3/16/07).

Several interviewees mentioned that price, not race or gender, is the motivating factor for primes in selecting subcontractors. CATA #6, a trade association representing heavy engineering contractors, said she does not feel that the race or ethnicity of her DBE members affects their ability to engage in business. Of her non-DBE primes she stated "Our guys don't care, they just want to list the low bidder." She stated that "the last ten minutes before the bid is due .. there is a flurry of faxes coming over to them of last minute bids from subcontractors and all they're looking at is the number." She saw this happen where in the last five minutes the prime received a bid from an electrical company that they had never heard of before, but they used the bid because it was lower. Interviewee #45, a white male-owned construction firm, stated that in the public sector general business factors affect the work environment for a firm, but not race or gender – "you have to know the business, the work you are quoting on, and you have to have financing and be strong enough to carry your payroll and equipment for a month or two." He stated with "the business we are talking about, all you have to do is be low bidder and have a bid bond." An engineer submitting written testimony stated: “in the Inland Area I see that the contractors and subcontractors are selected by reputation and cost only.” (Written testimony submitted 3/16/07).

A large general contractor at the Eureka public hearing stated that in the public sector "we are in a low-bid environment, and cost is a consideration when evaluating subcontractors, be they DBE or not … we go to great lengths to try and get DBEs" but "if I'm not the lowest bidder, it doesn't matter if I met the goal or not." (P.H. Eureka, 1/23/07).

At a public hearing in Redding, a white male-owned construction business was "not aware of any particular difficulties that minorities have had … when it's bid day and we're taking sub prices working as a prime, the lowest responsible bidder is the one that should do the work. And we're trying to cut everything we can out of our price to get the job ourselves we need the most competitive price. And in my 31 years I've never known of anybody that was white, green, African American, or plain that we could care as long as they can do the work and they've got a fair price." (P.H. Redding, 3/29/07).

Some DBE firms also feel that the work environment was generally good. Interviewee #27, an African American male-owned business, describes the work environment for DBEs, women, and minorities, in the California transportation industry as "good" and said that "[b]eing a DBE has been good to [him] and [his] family." Interviewee #27 stated that he had no experience with or knowledge of stereotyping, discrimination, or sexual harassment in the California transportation industry.

Interviewee #39, a Hispanic male-owned firm, replied that "It's not perfect, but we had the program there that helped us out . . . ." He went on to say that he thought there were "a few jobs" that the company could have received or "at least had a better shot at" if the DBE program had not been suspended. Interviewee #46, an Asian male-owned electrical construction company certified as a DBE with Caltrans, replied that he did not "see any difference if you were you a minority or not" and that he did not think that "conditions are any better or worse if you're a minority."

Interviewee #79, an African American male-owned firm who is not certified as a DBE with Caltrans, knows of a couple of certified entities that are doing relatively well with Caltrans. Interviewee #44, a Middle-Eastern male-owned firm, stated that his overall experience with the work environment for minorities in the California transportation industry has been good.

Interviewee #49, an African American male-owned company, emphasized the importance of opportunity. He viewed his success as an exception more than the rule because he had knowledge and experience from working in the industry for many years before starting his own business. In his opinion, he was able to take advantage of opportunities not available to others, but most African Americans were not able to get the same kind of experience that he had and that created more opportunities for him than would have otherwise existed.

Interviewee #54, a Hispanic male-owned firm not registered as a DBE with Caltrans, responded that he had never seen any difference between one race or the other and that he had never witnessed or experience racial discrimination in the transportation industry in California. Interviewee #61, an Asian American male-owned engineering firm, stated that there are no problems with the work environment for DBEs in the California transportation industry.

Some trade associations classified the work environment as positive while stressing the continued relevance and importance of government assistance programs. CATA #2, an African American trade association, feels that the work environment was for the most part good, but stated that the government needed to stay involved to make sure DBEs continue to be utilized. CATA #2 said that in his own experience, he found that prime contractors preferred working with firms owned by white women than ethnic minority-owned firms, such as his company. He said he had no experience with or knowledge of overt stereotyping, discrimination, or sexual harassment in the California transportation industry.

CATA #3, a Hispanic trade association, stated "there's a lot of opportunity" for DBEs, people of color, and women in the California transportation industry, but that everyone needs to push harder for work." According to him, "there's a lot of work, and we need to get a piece of it." He said that this would require the association's members to be aggressive on both the marketing and advocacy fronts, and that this advocacy and marketing is critical for DBE firms because there is an "unequal playing field." He also said that Caltrans needs to look at bringing in more Hispanics and African Americans on its jobs because they are the most underrepresented.

Some DBE firms feel that DBE firms were held to a higher standard than their non-DBE counterparts. Interviewee #19, a Hispanic male-owned firm certified as a DBE with Caltrans, stated that he believes the work environment for DBEs in the California transportation industry is generally good, but feels that DBE companies are scrutinized a little more. Interviewee #21, a Hispanic male-owned firm certified as a DBE with Caltrans, feels the work environment was improving. Interviewee #33, a Hispanic female-owned company, used the word "tolerated" to describe the work environment for DBEs in the California transportation industry. She said that they were not "welcomed with open arms" and that she thought some firms viewed DBEs "as a necessary evil" because they would rather not share work with DBE firms but do so because "Caltrans has a certain percentage." Interviewee #59, an African American male-owned firm, believed DBE firms were viewed as less capable and that DBE utilization was not what it should be. CATA #1, an Asian American trade association, described the work environment for DBEs as "very very tough" and said that DBE firms "have to be out there fighting all the time, as opposed to white [firms] . . . [that] just flow through."

CATA #7, a Filipino trade association, states that DBEs are held to a higher standard; they are scrutinized more than non-DBEs. If they make a mistake, they are not given the benefit of the doubt. On the other hand, if they do good work they will continue to be utilized. CATA #7 would like Caltrans to set aside certain work for small businesses, regardless of race or ethnicity, since all small business face the same challenges. The governor has expressed an interest in encouraging all small businesses.

Some firms perceive the work environment as less favorable to DBEs than it had been in the past. Interviewee #35, a white female-owned firm, classified the work environment for DBEs as "favorable … but maybe less favorable than it was in the past … because of minimizing affirmative action … there is more of a push toward general equality than favoritism."

Participation in and Awareness of Race, Ethnic and Gender Neutral Programs or Measures

Many interviewees stated they were not aware of or did not participate in race, ethnic, and gender neutral programs or measures sponsored by Caltrans. (Interviewees #1, #4, #5, #8, #10, #13, #17, #25, #26, #28, #29, #31, #32, #38, #41, #44, #52, #54, #55, #56, #58, #62, #65, #66, #68, #69, #73, #75, #76, #81, and #85). Others were aware of certain programs or measures and mentioned general business development workshops, skills assessment and training programs, and job fairs as discussed below.

Some trade associations reported awareness of and participation in outreach efforts by Caltrans and feel Caltrans is doing a good or fairly good job. CATA #1, an Asian American trade association, stated that Caltrans' outreach is "very positive" and that Caltrans tries "every possible means" to reach out to trade associations and communities and has good intentions to do outreach deep down into the community. He also stated that Caltrans is the only entity doing outreach to help small businesses and DBEs get more work for Caltrans. According to CATA #1, the barrier is not in outreach or at the top of Caltrans' bureaucracy but rather is in the middle management and technical area. He said that this area is where the gap exists and where Caltrans personnel do not have confidence that DBE firms can work as prime contractors.

According to CATA #2, an African American trade association, Caltrans does a "very good job" at outreach through its district directors but needs to get out and meet more with local trade groups and attend their meetings. He identified as positive developments the procurement fairs (he said there had been 22 in all) put on over the past two years and the brochure that Caltrans had prepared to help educate firms about selling to Caltrans. He said that an entity called Supportive Services did outreach efforts for Caltrans (on a contract from Caltrans) and that small business development centers sometimes helped do outreach to small businesses to help them get more work with Caltrans. In his opinion all the transportation agencies that receive federal funding should work together with Caltrans on outreach and other measures, but he said that "turf battles" among the different agencies prevented effective collaboration.

CATA #3, a Hispanic trade association, said Caltrans is very active in the commodities area, where it has been sponsoring fairs. But, he said, Caltrans needed to do more in the areas of construction and professional services, and the commodities were a good thing that should be replicated in these other areas. Also, said CATA #3, Caltrans needs to make sure that "how-to" people at its workshops are actually decision-makers so that small business people who attend can get advice that is helpful and that comes from someone who speaks with authority and experience. Otherwise, he said, the Association's members and others are turned off by these workshops.

CATA #6, a trade association representing heavy engineering contractors, said Caltrans does regional outreach meetings to encourage small businesses to bid on their projects – they talk about what's coming up, how to bid on them, how to get bonded, etc. Also, Caltrans has a mentor protégé program, and is supposed to be working on establishing a bigger pool of mentors and protégés. CATA #6 is not aware of any other agencies, besides Caltrans, doing outreach programs.

CATA #7, a Filipino trade association, stated that Caltrans sponsors a vendor fair which he thinks is helpful. However, this fair is less helpful for professional service providers. Caltrans has just started to implement a notification procedure that allows subcontractors to know whether the prime contractor to which they submitted a bid was awarded the contract and when the work will start. This allows subcontractors to know what is going on so they can contact the prime contractor and let them know that they are ready to work.

CATA #9, an association of consulting, engineering and land surveying firms, said Caltrans has done a lot of outreach but without a hard requirement there is no incentive for the prime consultant to hire a DBE. Some examples include: the look-ahead, small business council, district small business council, upcoming opportunity fairs. These are effective to a limited extent but most of it is word of mouth. He stated there could be more – i.e. pre-SOQ conference. As far as outreach efforts by others to encourage work with Caltrans, the State Route 125 Project had a program, but he said this was

implemented after they "failed miserably" to meet any DBE goals. By then it was too late for most of the firms to get involved. These efforts involved conferences and meetings with the staff. Caltrans has tried to cut down on the timeline for the RFQ process at the back end and that has been helpful.

Some Interviewees feel that Caltrans needed to improve its outreach efforts and/or improve communication of the efforts it is undertaking. CATA #10, an Asian American trade association, said he has not seen many outreach programs. They used to have a small business liaison but he has not seen a lot of that recently. He does not have experience with financing, bonding, and insurance programs. He has not seen many programs on how to do business with Caltrans.

A representative from a minority trade association testified, at a public hearing in Sacramento, that they only have ten (10) certified members – "so in terms of outreach, we see that we have to contact Caltrans for certification to get members, our members, certified. So the outreach in is, in my mind, very limited." (P.H. Sacramento, 3/22/07). According to Interviewee #54, a Hispanic male-owned firm, "If there is something out there, they keep it a big secret. Most people don't know about it." According to Interviewee #25, a Hispanic male-owned firm, "[t]hey [Caltrans] didn't send us a flyer. They didn't send us anything . . . [or] say, 'Hey, we have this program for small companies' . . . nothing at all."

According to Interviewee #67, a white female-owned firm, the fact that she is not aware of anything going on in these areas shows that she is "not being informed." Even the few notices she does receive from Caltrans, said Interviewee #67, come only a few days before the event. She also said that she had never received anything from Caltrans in the way of outreach – to either DBEs or small businesses – and that she feels like the situation is "futile." The outreach she was aware of was a 2001 meeting in Oakland (at the Oakland Coliseum) to which small businesses and DBE firms were invited so that prime contractors could be made available to them. It was at this meeting, that she realized that there exists a "very unfriendly" atmosphere between Caltrans and DBEs and small businesses. According to Interviewee #67, many people in the audience were expressing their frustrations and, though Caltrans officials made some effort to respond to their concerns, the meeting was eventually suspended.

She also was unaware of outreach efforts undertaken by anyone other than Caltrans to increase the participation of DBEs and small businesses doing work for the agency. Interviewee #67 said that she attended a meeting at Caltrans' regional office in San Luis Obispo, in the spring of 2006 to discuss Caltrans' dropping its DBE participation goals requirement.

Interviewee #33, a Hispanic female-owned firm, stated that other agencies have a "much stronger presence" than Caltrans in terms of outreach efforts to help businesses by increasing their opportunities and skills to work with these agencies. She said that the company had received "some kind of notifications of their [Caltrans'] workshop," but she could not remember if this workshop was for DBEs or for subcontractors generally. According to Interviewee #33, this workshop was on "how to do business" with Caltrans.

Interviewee #7, a white female-owned business, feels that Caltrans' outreach has been "completely gone" since it disbanded the advocacy group in the 1990s and that the outreach they do have now is geared towards construction contractors. He stated that they had stopped going to Caltrans seminars because everything was so heavily focused on bidding, but "engineering's not on the bid basis." He had no knowledge of or experience with educational or training programs put on by Caltrans or programs on how to do business with Caltrans, but he stated that they would like to put on training

classes for Caltrans employees. Interviewee #7 likewise had no experience with or knowledge of Caltrans programs to assist with bonding, insurance, or financing.

Interviewee #40, a white male-owned firm, does know that there are outreach efforts by Caltrans to assist small businesses and DBE companies. He says there is no outreach if you're in the "good 'ole boy" network. Interviewee #6 had no experience with or knowledge of outreach efforts by Caltrans to assist businesses by increasing their opportunities and skills to participate in Caltrans projects or any outreach or training programs offered by Caltrans, other than a seminar back in 1991 or 1992 (which he attended) on how to get DBE-certified. Interviewee #6 also attended in July 2005 a seminar in Riverside, California put on by the small business administration to learn how to work with Riverside County and Caltrans, but he feels that this seminar was a "waste of time" and that he was treated like he had never been in business before.

Interviewee #22, an African American male-owned firm, believes that there is no reason why a race and gender neutral program could not successfully foster increased contracting with small businesses at Caltrans. He cites BART as an agency that has a very effective program. However, he wonders whether Caltrans, because it does not answer to a local constituency, which is concerned with keeping tax dollars in the community, will ever modify its contracting philosophy. He sees no reason why Caltrans could not modify its contracting philosophy to attempt to keep money it spends in the local communities in which it works. He believes that a sincere focus on this or on working with small businesses that will necessarily not have the same level of reputation and connections as the major firms, could not be successful. He points to numerous local agencies that have done this as examples of how it is possible to build large infrastructure projects while at the same time fostering local small business.

According to Interviewee #31, an African American female-owned firm, no one from Caltrans has ever contacted the company with any offer to provide any training, information, or access to assist the company in working for Caltrans – "it has been a long time since [they] have heard anything from Caltrans." Interviewee #32, an Asian American female-owned firm, had no experience with or knowledge of outreach efforts by Caltrans to assist businesses; any programs to assist with bonding, insurance, or financing; any educational and/or training programs, though she noted that it "would be great" if Caltrans offered these.

A DBE and 8a company stated that matchmaking events have resulted in zero calls. He stated they have attended "how to do business" conferences for the water authority but these are fruitless because the size of the contracts is prohibitive to small DBEs. (Written testimony submitted 3/26/07).

Interviewee #5, a white female-owned business, feels that Caltrans is more interested in satisfying its administrative requirements than in helping DBEs become and be successful.

Another female business owner stated: "I feel by constantly having the meet and greets, hiring outside consultants, etc. all you are truly doing is wasting small and emerging business owners' time and taxpayer dollars." (Written testimony submitted 4/4/07).

Some interviewees have "heard of" outreach efforts but were not aware of the specifics. (Interviewees #20, #21, #35, #50, #51, #60). Interviewee #51, a Hispanic male-owned firm, said that he knew of Caltrans undertaking outreach efforts but that he had not been involved in any of them, or with any programs to assist with bonding, insurance, or financing, or any educational and/or

training programs. Interviewee #60, an Asian American male-owned firm, indicated he once received an email about a seminar and some training related to Caltrans. He has never been to educational or training seminars on how to do business with Caltrans specifically. Interviewee #35, a white female-owned firm, thinks Caltrans has sponsored some workshops for small businesses but does not remember them. Interviewee #50, a white male-owned firm, has not participated in any, but thinks Caltrans provides educational programs to increase opportunities for small businesses to participate in Caltrans projects and heard from others that Caltrans is pretty active in doing so.

An MBE submitted written testimony that it has received solicitations from prime contractors, utilities and construction firms from across the country but they "have never received a solicitation to bid on any project in the State of California, even though construction is a major industry within the state." They are "very disappointed with the outreach efforts and would be quite surprised if any organized outreach program actually exists." (Written testimony submitted 4/19/07).

Assistance with bonding, insurance, financing and capital.

Very few interviewees are aware of any programs aimed at assisting small businesses obtain bonding, insurance, or financing, and even fewer have participated in such programs. Many of the DBEs interviewed believed such a program would be helpful. Some interviewees were not interested in such a program.

Interviewee #40, a white male-owned firm, stated that when the DBE program was in existence, his company had to provide some programs that assisted with bonding, insurance, financing, and educational programs – none of which he agreed with – "if you're gonna be in business, you should know how to do that stuff." CATA #2, an African American trade association, said that the State of California had programs to assist with bonding and insurance and that, though prime contractors are supposed to help subcontractors get financing, he had never seen it because some DBE firms do not want this kind of help and/or prime contractors do not want to give it.

Interviewee #49, an African American male-owned firm, said that Caltrans "at one time" helped out with bonding, insurance, and financing. Interviewee #60 an Asian American male-owned firm, notes that while Caltrans does have bonding and finance seminars, he would like to see insurance seminars presented. Interviewee #48 an Asian American male-owned firm, stated that he receives information on programs to assist businesses with bonding, insurance, and financing, but he said that he could not remember if this information was from Caltrans or some other agency.

Interviewee #27, an African American male-owned firm, stated that the company does not need programs to assist with bonding, insurance, or financing, because the prime contractors for whom they work take care of these things.

CATA #3, an Asian American trade association, said that he had not heard of Caltrans offering any programs to assist with bonding, insurance, and/or financing, but he again mentioned the U.S. Department of Transportation's loan guarantee program and suggested it as something Caltrans may wish to consider replicating.

Interviewee #9, a white male-owned firm, stated that he was aware of Caltrans' outreach efforts through various liaison committees, but that attending a seminar and being selected for a project "are two different things[,]" and that outreach and training "won't be the whole solution . . ." Interviewee

#9 stated that he had attended Caltrans-sponsored seminars for specifications, cost-estimating, and seismic research (the latter were coordinated with local universities), and that these programs had been "very rewarding."

The remaining interviewees had no knowledge of programs sponsored by Caltrans to assist with bonding, insurance or financing. CATA #9, an association of consulting, engineering, and land surveying firms, was not aware of any such programs for architects and engineers.

Educational, training, technical skills.

Most interviewees were not aware of any Caltrans programs aimed at educating, training, or improving the technical skills of small or disadvantaged business owners. Several interviewees thought such programs would be helpful. Interviewee #44, a Middle Eastern male-owned firm, does not know about any educational/training programs to increase opportunities for small businesses to participate in Caltrans projects. He wishes Caltrans offered such programs. Interviewee #16, a white male-owned firm, attended a program in San Diego put on by Caltrans in conjunction with the Federal Highway Administration (FHWA) for professional development, and he feels that it was "a really good conference." CATA #3, a Hispanic trade association, said that there were some promising educational and training programs coming out of District 7 (he said he did not know about others), including a high school mentor program to promote careers in the construction and professional services fields.

CATA #2, an African American trade association, stated that Caltrans offers a lot of workshops on how to use its website and on-site certification workshops, and that he feels that the Association's members should take more advantage of these workshops. He also said that Caltrans has an education program in every area where one is needed and that Caltrans "do[es] a very good job with that." He noted, however, that Caltrans programs and workshops directed at outreach, training, and the like were done better in the Bay Area and where the community demand for these programs is stronger.

Some interviewees had experience with non-Caltrans training programs. Interviewee #4, a Native American male-owned firm, has experience with training programs, but not with any programs conducted by Caltrans. The programs were undertaken at the company's own expense, and Interviewee #4 stated that it would be good to have Caltrans or someone else cover these costs. Interviewee #4 stated also that training in schools and for persons fresh out of school could help to increase the participation of DBEs working for Caltrans (and for other agencies and in the private sector).

Interviewee #79, an African American male-owned firm, said the City of Los Angeles sponsored a training session for contractors at the mayor's office. Since Interviewee #79 is well-known and respected in his field, he was asked to recommend additional contractors to participate. The program was called "Business Boot Camp," and Interviewee #79 served as a mentor. The Los Angeles United School District also provided some training on the DBE certification process. He found these programs to be very helpful, and wishes there were more.

CATA #10, an Asian American trade association, stated he did go to a few educational/training programs but that they need improvement, particularly with regard to the selection process, preparation of the RFP, and training on how to prepare for auditing. Interviewee #58 is not familiar with any outreach efforts by Caltrans, but she attended one federal marketing session that was not specific to Caltrans. She is aware of outreach entities by entities other than Caltrans – she attended a forum for local and government business where Caltrans representatives were present.

At a public hearing in Sacramento, a DBE firm certified since 2003 noted it is aware of training programs, and provides some of the training classes in that program. According to that firm, Caltrans holds a number of training classes each year. He also mentioned a planning rooms for DBEs doing business with Caltrans at various locations in different cities. DBEs can come to the office and look at plans, specifications, and estimates "instead of having to get them themselves." (P.H. Sacramento, 3/22/07).

Some interviewees were aware of educational or training programs offered by Caltrans but had never attended. (Interviewees #27, #56). Interviewee #27, an African American male-owned firm, stated that he knew of outreach efforts by Caltrans, through programs offered in Sacramento, to help businesses by increasing their opportunities and skills to participate in Caltrans projects but that they "never go to them" because they already know what they want and what they want to do and how much they can do.

CATA #1, an Asian American trade association, believes Caltrans does not offer educational or training programs for DBEs or small businesses (but instead offered such programs only for Caltrans employees). Interviewee #34, a white male-owned firm, was not aware of any programs offered by Caltrans to assist with bonding, financing, or insurance, but he was aware of educational and/or training programs that it offered, and he said that he had sent some his staff to attend these programs. According to Interviewee #34, he "sometimes will found out about Caltrans training . . . because [he] interact[s] with Caltrans staff so much." However, #34 stated, "I'm certainly not aware of instances where Caltrans has made that information readily available to anyone in the private sector, let alone DBEs. That's really been stuff that's been strictly at my own initiative. And frankly, if you didn't interact with Caltrans as much as I do, I don't think you'd ever find out about it."

Interviewee #13, a Pakistani male-owned firm, had heard about Caltrans' education and training and other such programs, but he described them as "only talk," "all just make believe work," and "effort just for the sake of effort."

How to do business with Caltrans.

Some interviewees were aware and/or have participated in programs regarding how to do business with Caltrans. CATA #6, a trade association representing heavy engineering contractors, stated that Caltrans does regional outreach meetings to encourage small businesses to bid on their projects – they talk about what's coming up, how to bid on them, how to get bonded, and other topics. Interviewee #56, a white male-owned firm, attended a “how to do business with Caltrans” seminar many years ago.

Interviewee #48, an Asian American male-owned firm, stated that he receives emails from Caltrans and that Caltrans makes "very good" outreach efforts. Interviewee #48 mentioned workshops offered by Caltrans on how to do business with Caltrans that were directed specifically at DBE firms. He noted, however, that these efforts are mostly directed towards activities that his firm does not undertake.

Interviewee #34, a white male-owned firm, attended "several" day-long workshops put on jointly by Caltrans and the San Diego Association of Governments (SANDAG) where "they went over future contracting opportunities," and he recalled that there were tables at these workshops geared towards providing information to DBE firms. He could not point to any "entirely separate outreach efforts that were targeted specifically towards DBEs."

Interviewee #46, an Asian American male-owned firm, stated that he had attended different workshops put on by Caltrans and found them helpful, especially when he was first starting out in business. According to Interviewee #46, these workshops were "mostly trying to tell you how to go about getting projects" and about connecting businesses with each other (especially smaller ones with larger ones), and some also had "insurance people [there] to talk to and things like that." He feels that Caltrans did a good job of helping firms network with others in their respective fields.

Interviewee #47, a white male-owned firm, stated that Caltrans sponsors several outreach programs, including programs to assist small businesses, the Cal-mentoring program, and programs on how to do business with Caltrans. Also, Caltrans hosts meetings where people can come and talk about issues and frustrations on projects. There is a liaison assigned to addressing these problems and working out amicable solutions. This does a lot to diffuse potentially difficult situations.

Interviewee #8, a Hispanic male-owned firm, knew that Caltrans had certain links on its website to gain knowledge on how to do business with Caltrans, but he said that "it's hard to navigate." Interviewee #59, an African American male-owned firm, notes that the website contains tips for "doing business with Caltrans." Interviewee #64, a white male-owned firm, subscribes to the "SOS – Subscription Outreach Service," which emails him opportunities matching his profile for traffic signal work. He is not aware of any other programs sponsored by Caltrans. Interviewee #19, a Hispanic male-owned firm, has received emails informing him of upcoming projects and Caltrans soliciting companies to attend conferences, seminars

Interviewee #16, a white male-owned firm, stated that he once heard about a Caltrans workshop to increase businesses' skills and opportunities to work for Caltrans, but that he was unable to attend because of a scheduling conflict. Interviewee #61, an Asian American male-owned firm, is familiar with programs on “how to do business with Caltrans,” but has not attended because of time limitations. Interviewee #9, a white male-owned firm, had no experience with of knowledge of Caltrans' offering programs to assist with bonding, insurance, or financing, but he said that others from his firm had gone to programs on how to do business with Caltrans.

Some interviewees who attended programs did not find them helpful. Interviewee #48, an Asian American male-owned firm, noted that these efforts are mostly directed towards activities that his firm does not undertake. Interviewee #49, an African American male-owned firm, said that he once went to a Caltrans workshop where he learned some things about the administrative aspect of working with Caltrans, but that he already knew the majority of the subject matter discussed and/or presented. He thought that this seminar would have been (more) helpful to someone who, unlike

him, "did not come up through the industry." CATA #1, an Asian American trade association, said that Caltrans had for years been putting on programs on how to do business with Caltrans. However, these programs were "not very useful" because, he said, attendees at these programs are just given flyers and the discussions only scratch the surface but do not get to the meat of how to do business with Caltrans. CATA #9, an association of consulting, engineering, and land surveying firms, stated they do have some how to do business with Caltrans programs but they do not help businesses get Caltrans work. Interviewee #39, a Hispanic male-owned firm, stated that he had "seen they [Caltrans] had some seminars from time to time" but that these seminars "didn't seem to specifically apply to [the company]."

Some interviewees were aware of "how to do business" seminars sponsored by others. Interviewee #56, a white male-owned firm, was aware of outreach efforts by other companies with regard to Caltrans work because “there’s a lot of people that accept [Caltrans’] certification as a small business . . . so if you’re certified at Caltrans level, you’re certified with all the counties. Interviewee #, a Native American male-owned firm, stated the Public Utilities Commission has done some how to do business seminars that he has attended, and there was one he attended at California Polytechnical. Interviewee #5, a white female-owned firm, discussed liaison meetings sponsored by the Association of General Contractors, stating that these meetings were "very helpful," and that new practices have developed as a result of these meetings.

Interviewee #8, a Hispanic female-owned firm, said that the company "get[s] a lot of internet-type things for workshops and other kinds of things, but usually they're not associated with Caltrans or any other agency." Interviewee #16, a white male-owned firm, was aware of economic development programs put on by the Small Business Administration to help small businesses, but he noted that these programs were not Caltrans-specific. Interviewee #64, a white male-owned firm, stated that small business organizations sponsor programs and they are helpful.

Interviewee #26, a white male-owned firm, noted that a builders exchange of which he was a member had offered such programs. Interviewee #52, a white male-owned firm, said that he had, however, seen outreach by entities other than Caltrans to promote work opportunities for DBE firms, though this outreach was not directed specifically towards Caltrans work. CATA #10, an Asian American trade association, said other agencies like Los Angles Unified School District do make efforts to encourage small business participation. Interviewee #81, a Hispanic male-owned firm, does not believe MTA has any official programs, but Interviewee #81, feels that they do try to reach out and help small businesses. Also thinks the City of Los Angeles reaches out by phone calls, and sending letters, emails and invitations re bidding opportunities.

Interviewee #19, a Hispanic male-owned firm, has seen outreach efforts by private sector companies in forms similar to Caltrans, for example, conferences and seminars. Interviewee #18, a Native American male-owned firm, said that private companies like Chrysler have sent Interviewee #18 a few things on partnering in some work, but it is not in Southern California. Other companies used to do more outreach, but not recently. It has been six or seven years since he has seen such an effort by the private companies.

He is not aware of any outreach efforts by Caltrans. He has gone through the City of Fresno, which has put on programs at Fresno State relating to Caltrans government work and how to contract with public agencies in general. Caltrans had a representative at the seminar he attended, even though it was not put on by Caltrans. Interviewee #18 knows of bulletins and online services where general

contractor may post opportunities, advertise and solicit bids and RFPs. There is the local Builder's Exchange which has areas where postings can be found. Interviewee #18 has noticed a decline in the request for DBEs now since DVBEs are the only requirement. Since the minority goals have been cut back, Interviewee #18 feels that the public sector, as a whole, has disregarded any kind of goal or requirement – "there's no teeth" in it.

Interviewee #61, an Asian American male-owned firm, has knowledge of outreach efforts by others (she receives copies of the sign-in sheet at the pre-proposal meetings and this generates networking). She doesn't have knowledge of any private companies promoting the use of small businesses for Caltrans work.

At a public hearing in San Jose, a DBE firm certified with Caltrans as an MBE in Alameda County stated "my main experience [with outreach] has been in Alameda County, with ACTA and ACTITA, they do a fabulous job of outreach. Caltrans, okay." (P.H. San Jose, 4/4/07).

Interviewee #10, an African American male-owned firm, was aware of outreach efforts by entities other than Caltrans to increase DBE and small business participation, but he said that these efforts were directed towards increasing the number of DBEs and small businesses working for those particular agencies (and not for Caltrans).

Efforts to segment larger contracts into smaller contracts.

Most interviewees were not aware of efforts by Caltrans to segment larger contracts into smaller pieces to promote opportunities for small and mid-sized firms to act as primes. However, many interviewees would be in favor of this effort. Interviewee #5, a white female-owned firm, did not have any experience with or knowledge of Caltrans efforts to segment larger contracts into smaller pieces, but said that breaking up large contracts is "a big deal." Interviewee #81, a Hispanic male-owned firm, does not have any knowledge of Caltrans efforts to segment larger contracts into smaller ones, but that would be "great." Interviewee #1, a Native American male-owned firm, does not think Caltrans needs to streamline the bidding process because it is okay as it is. He thought it would be a "good idea [and] . . . a wonderful thing" for Caltrans to segment larger contracts into smaller contracts. Interviewee #13, a Pakistani male-owned firm, had no knowledge of or experience with Caltrans trying to break up larger contracts, but he said that this is something that Caltrans should do. Interviewee #25, a Hispanic male-owned firm, said it would be "wonderful" if Caltrans did break up contracts into smaller jobs so as to give his and other small businesses more opportunities for work.

Interviewee #7, a white female-owned business, has had no experience with or knowledge of Caltrans trying to segment larger contracts into smaller ones, but suggested if Caltrans is going to do so, it should "exclude the big boys [from bidding] and then allow the big boys to compete [only] if there aren't any qualified GM medium or small size firms that are submitting them [bids]."

Interviewee #29, a Hispanic male-owned firm, believes that Caltrans bundles its projects, which makes them out of reach for smaller contractors. Interviewee #29 noted that his phenomenon has worsened over the years. He has not seen Caltrans attempt to segment larger contracts into smaller ones.

Interviewee #54, a Hispanic male-owned firm, said he did not know about Caltrans breaking up its larger contracts to give more opportunities to small businesses. Interviewee #75, a white male-owned firm, has not heard of any efforts by Caltrans to break up large contracts into smaller projects in order to provide small businesses an opportunity to participate. He thinks it would be "stupid" to do so, as there are plenty of opportunities for smaller businesses, provided, of course, they can afford the bonding requirements.

An educational provider noted that most of the Caltrans RFPs and RFQs are larger than his company's focus, and that"[i]t would be great to see more projects of more limited scope and content. I believe small businesses in California, whether minority owned or not, would be more inclined to respond to smaller projects." (Written testimony submitted 3/12/07).

Some interviewees were aware of this effort by Caltrans. Interviewee #19, a Hispanic male-owned firm, has seen, in the past and even recently, that Caltrans has segmented larger projects into smaller ones. Interviewee #20, an Armenian male-owned firm, has heard of Caltrans breaking larger contracts down into smaller ones to promote opportunities for small contractors. Interviewee #26, a white male-owned firm, stated that "[i]t does seem that [Caltrans] has broke[n] up projects more . . . over the last five years." Interviewee #45, a white male-owned firm, stated that Caltrans does segment some large contracts into smaller ones, but "they don't do enough of it." Interviewee #50, a white male-owned firm, has heard that Caltrans is making efforts to segment larger contracts into smaller contracts. He feels this is a good idea because certain sections of a project would have to be divided up and handled by specific groups within a large firm anyways. Interviewee #59, an African American male-owned firm, attended a meeting where Caltrans discussed breaking up projects into smaller pieces and developing smaller kinds of projects so that small to mid sized firms could compete (same thing with streamlining the bidding process).

CATA #1, an Asian American trade association, said that he had heard from Caltrans' director and others about a commitment to segment more of Caltrans' larger contracts to promote opportunities for small businesses and that he understood that District 4 and District 7 had been doing this, but also that he and the Association's members wanted to see this commitment become a formalized policy.

Interviewee #11, a Native American male-owned firm, is aware that recently, District 7 broke what could have been one or two very large contracts into three or four. Interviewee #11 knows that one of the contracts did go to a smaller business and that there is an effort to go that route, which he thinks is "outstanding." CATA #6, a trade association representing engineering contractors, stated that Caltrans is now splitting up larger contracts into smaller contracts.

CATA #10, an Asian American trade association, stated he has seen some effort to segment contracts but it is easier for Caltrans to manage one large project than many smaller projects and Caltrans thinks it is more cost effective although he disagrees with this because small firms are more competitive than larger firms.

Interviewee #60, an Asian American male-owned firm, has heard that Caltrans wants to segment larger contracts, but he does not think they can promote this program. The contracts might be smaller, but its not the smaller companies that are competing for the jobs. CATA #9, an association of consulting, engineering, and land surveying firms, stated Caltrans has tried to segment larger contracts to smaller ones but the problem is that the selection process is the same so that if a $3

million contact is segmented into three $1 million contracts the same firm is the most qualified for all contracts based on the way the process is set up right now – that has happened in the past within a couple of years.

Simplify and streamline the bidding process.

Very few interviewees were aware of efforts by Caltrans to simplify or streamline the bidding process. Interviewee #7, a white female-owned business, stated that Caltrans had simplified purchasing, but this was their only knowledge of or experience with efforts by Caltrans to simply or streamline its bidding process. CATA #1, an Asian American trade association, noted the distinction between Caltrans' contracting for architecture and engineering work and construction work, and said that Caltrans is making efforts to simplify its bidding process and that he knew of no complaints about these efforts. Interviewee #40, a white male-owned firm, has no knowledge of Caltrans efforts to streamline the bidding process, noting that its been consistent for as long as she can remember.

Interviewee #61, an Asian American male-owned firm, has experience with efforts to simplify and streamline bidding – "every time there is a pre-proposal meeting they do go by steps on how to actually explain what are [sic] required and needed and try to make it as painless as possible." CATA #6, trade association representing engineering contractors, stated that Caltrans is coming out with plain language specifications. He indicated that Caltrans is trying to re-write its specifications to make them easier to understand. He said this is a good step.

Recommendations by Interviewees

The following is a compilation of recommendations received from the contractor and trade association interviewees. Each of the interviewees were offered an opportunity to list the recommendations and changes it feels are most needed to improve Caltrans contracting and procurement procedures and specifically the DBE Program. All of the respondents made at least one suggested recommendation for improving Caltrans' program. The recommendations below are, when possible, presented in the interviewee's own words and grouped by the number of similar responses. This section also provides some general recommendations that are based upon problems or issues identified by the interviewees and suggestions they made to address the problems and issues.

Segment or breakdown large contracts.

Many businesses suggested breaking larger contracts into smaller pieces so that small businesses or DBEs could participate as primes (Interviewees #1, #2, #3, #7, #8, #11, #12, #14, #18, #64, CATA #1, #2, #7). Interviewee #51, a Hispanic male-owned firm, pointed to the importance of increasing work opportunities for DBEs, stating, "I think the one thing that I have said before is the more that they increase the participation in the contract, the more people are going to have an opportunity to work." Interviewee #12, an African American male-owned firm, suggests that smaller jobs would make Caltrans more "accessible" to small companies.

Interviewee #1, a Native American male-owned firm, stated that he is unable to take on contracts that are more than a couple hundred thousand dollars a year. Interviewee #2, an African American male-owned firm, feels that the average size of Caltrans contracts are simply too large for the small business person to compete for, no matter what their race.

Interviewee #3, an Asian American male-owned firm, stated that outreach efforts to DBEs and small businesses are "not real," both in the private sector and the public sector (including Caltrans), since agencies and businesses look at it as a compliance issue and something they have to do. Interviewee #3 said that it would be helpful if Caltrans segmented larger contracts into smaller contracts (in order to promote opportunities for small contractors), but he had no experience with or knowledge of them doing so.

Interviewee #8, a Hispanic male-owned firm, is not aware of anything Caltrans had done to simplify or streamline the bidding process (which Interviewee #8 feels was "pretty easy" already) or to segment its larger contracts so as give more opportunities to smaller businesses, though he said, "I've often thought of why they didn't do that [break their contracts up]."

Interviewee #14, a white male-owned firm, feels that if Caltrans were to segment its contracts more, this might even be more efficient than the current system because under the current system, the really big firms do the segmenting anyway but do so at a profit. In essence, segmenting would be a way to help smaller businesses and to cut out a middle-man between Caltrans and the firms that very often end up actually doing the work.

Interviewee #29, a Hispanic male-owned firm, stated that Caltrans should not waste people's time if the incumbent is going to be selected anyway, and his suggestion is for Caltrans to allow companies to be more upfront about whether the opportunity is really there. Also, the bundling of projects makes the projects out of reach for small entities, and so Caltrans should break them down into smaller projects.

Interviewee #51, a Hispanic male-owned firm, thought it would "be good" if Caltrans were to break up its larger contracts, although he did not know how Caltrans would go about breaking up a highway project, and he wondered if breaking up contracts would drive up costs. He said that Caltrans would be better off increasing the participation of DBEs on its contracts than trying to break its jobs down into smaller bidding contracts.

Interviewee #54, a Hispanic male-owned firm, suggested that Caltrans could improve its DBE program by splitting up its jobs so that specialized contractors have more opportunities to get work because, he said, otherwise the big contractors will keep it all.

CATA #1, an Asian American trade association, suggested that Caltrans set aside a certain number or percentage of its contracts for segmenting. Caltrans should break down more contracts to provide more opportunities for small businesses to work as prime contractors.

Develop a method of setting aside small contracts for DBEs.

Some interviewees suggested setting aside certain projects for DBEs. CATA #3, a Hispanic trade association, would like Caltrans to earmark a certain number or percentage of small contracts for DBEs each year. Interviewee #32, an Asian American female-owned firm, suggested that Caltrans could improve its DBE program by setting aside small dollar values for DBEs, so that DBEs can start relationships with other businesses and "see how the business relationship works out with that initial project and then grow from there." She said that she did not think that "just setting goals with these large businesses really works or is effective" and that she thinks Caltrans "need[s] to really go directly to the DBEs."

Interviewee #59, an African American male-owned firm, thinks that Caltrans should use more DBEs – a huge project like the Bay Bridge should not have happened with so few DBEs on board and so few small firms on board. Interviewee #59 thinks that Caltrans needs to find a way to have smaller packages within the larger package so that DBEs can actually participate more on contracts and compete with larger firms. He also suggests that Caltrans might want to look at direct awards to small businesses, rather than through the general bidding process.

Interviewee #32, an Asian American female-owned firm, said that "just like [in] the federal sector . . . , DBEs can get a large business to be a sub for them," and she felt that this arrangement would be a "win-win for everybody."

Interviewee #7, a white female-owned business, suggested that Caltrans keep an on-call list and award jobs to DBEs by rotation, as the MTA does. He stated that Caltrans "needs to create a bridge from DBEs to primes" because when a firm loses its DBE status due to its exceeding the net worth threshold, "you're still too small to be a prime unless you have a specific area of specialty that nobody else offers." She noted that such niche firms were more common in the biology and environmental reconnaissance fields but stated that "in engineering that's really hard to have and there's no bridge there from being a DBE to be[com]ing a prime because there's so much emphasis placed on size."

Interviewee #13, a Pakistani male-owned firm, recommended Caltrans subdivide its projects into smaller ones that can be handled by DBE firms. This way, suggested Interviewee #13, the DBE firms could deal directly with Caltrans instead of "being at the mercy of some big prime" to be part of the team – "Why does it always have to be that we are at the mercy of some prime to benefit from DBE status when Caltrans can have those benefits directly, rather than going through all these extensive programs of mentoring and certification . . . [and] awareness . . . .?" According to Interviewee #13, Caltrans does not need "all these mentoring programs and stuff like that" but instead needs to simply make sure that DBE firms – and not the same ones over and over again – are used.

Interviewee #13 recommends Caltrans require prime contractors to rotate the DBE subcontractors they use on different projects, so that different DBE firms would have the opportunity to work for these primes (instead of the same firms getting all the work).

Ensure small business have fair opportunity to bid on small contracts.

Interviewees suggested that Caltrans foster a program that focuses on development of small businesses, which might limit bidding on selected small contracts to those registered as a small business with Caltrans (Interviewees #49, #63). The purpose of this program would be to reduce the perception of large, national contractors being awarded small Caltrans contracts. Alternatively, interviewees suggested Caltrans initiate a preference for small businesses that operates similarly to its local preference allowance. Interviewee #49, an African American male-owned firm, recommended to improve Caltrans DBE program that Caltrans (as he understood some other agencies had done) implement a preference and/or percentage requirement for small business utilization on its project, and he said that doing so would be a "very good thing" for businesses that are just starting out.

Interviewee #65, a white male-owned firm, sees large contractors always getting bids because smaller companies are not receiving subcontractor opportunities. Interviewee #65 stated that most small business are becoming disadvantaged because they cannot get work, as they are so small, or the work is being done in-house. No small contractors can afford the insurance and bonding requirements that

are as large as those required by Caltrans, so there is no point in even bidding for work. He notes that while women and minority owned business continue to get special privileges, the single, one-man companies are becoming an "endangered species" when they've been the mainstay of the industry.

CATA #9, an association of consulting, engineering, and land surveying firms, stated the scope of work items on Caltrans RFPs should be more specific and more realistic. He stated there should be a mandatory, pass/fail requirement for small business utilization (not necessarily DBE – "small business would be the key"). He stated there should also be a way to enforce it because right now, a prime consultant can say whatever they want on the SOQ (Statement of Qualifications), and then "it sort of gets thrown out the window when you come to the task orders." He also stated the prime consultant has no incentive to use a subconsultant because there is no mark-up on subconsultants since it is all direct pass through so the primes are taking on the risk of subconsultants with no incentive.

Maintain a race and gender-neutral program.

Some DBEs suggested that Caltrans eliminate the DBE requirements. The owner of a small minority business enterprise doing building infrastructure, suggested the creation of a small group comprised of two to three large contractors, three to four minority contractors, and two to three staff to examine the objectives of the DBE program and determine whether it is still useful. (Written testimony submitted 4/4/07).

Interviewee #3, an Asian American male-owned firm, recommended Caltrans suspend the DBE program and leave things to the free market. He felt that the program could be better if it were modeled after the SBA 8A program, and if Caltrans directly negotiated with DBEs and small businesses. With respect to its DBE program, Interviewee #3 thought Caltrans could be "more user-friendly" (i.e., that Caltrans needs to change its culture) and needs a better teaming attitude.

Interviewee #55, a white male-owned firm, stated: "The people would be better served if the government could run projects like the private sector runs project[s]. But it's hard because there's so many interests. [A] private sector company has one interest, it's own."

Interviewee #17, a white male-owned firm, stated: "I'd like to see [Caltrans' DBE program] abolished myself." He believes the "status quo" should change, but not so much with respect to DBEs as with respect to the Caltrans bidding process (how Caltrans selects and awards bids), which he said frustrates him as a taxpayer.

Interviewee #17 suggested Caltrans needs to look beyond ownership and "get more in the business of finding out how many minorities [a] firm has working for them instead of a business that could be owned by a woman . . . [but] not have any minorities at all working there." Interviewee #17 stated that his firm has "more Hispanic, Asian, and Middle Eastern [people] working here than probably whites," and expressed frustration that the DBE program is focused only on ownership. According to Interviewee #17, if the goal of the DBE program is to increase the number of people of color working in the transportation industry, then the program does not accomplish this goal by looking only at a firm's ownership.

Interviewee #26, a white male-owned firm, stated that "to award somebody extra work because of the color of their skin is wrong. I think it makes our society more racist . . . . I think they're shooting themselves in the foot to discriminate against the white male." Interviewee #26 recommended that

Caltrans should perhaps create within its small business preferences "even another category for real[ly] small businesses." Interviewee #26 suggested that Caltrans could, if it is going to have DBE goals on its projects, "have different goals for different areas" in order to account for, according to Interviewee #26, it being easier to meet DBE goals in most urban areas and certain parts of the state than it is in other areas.

Interviewee #40, a white male-owned firm, would like the DBE program disbanded in its entirety. She thinks there should only be some sort of emerging small business program rather than DBE categorizations. She has spoken to several contractors, and notes that the process for getting certified as a DBE is entirely too difficult and there is too much paperwork. She notes that one subcontractor who was a DBE didn't even go through with recertification because the process was so daunting.

Interviewee #56, a white male-owned firm, wants the program disbanded in its entirety. He thinks that, overall, it costs the taxpayers money because it costs the contractors time to make their good faith efforts. Interviewee #56 does not think that a huge disadvantage exists, even for minorities. He thinks that the DBE Program is no longer necessary. Interviewee #56 thinks that the industry is "an equal playing field."

Interviewee #69, a white male-owned firm, believes the DBE program should be terminated altogether. He feels that is the only way he has a fighting chance of getting work. The suspension of the DBE program last year flooded his business with work. Interviewee #76, a white male-owned firm, is in favor of eliminating the program and feels the preferential treatment given to DBEs is unfair, as well as completely unnecessary.

CATA #6, a trade association representing heavy engineering contractors, stated that the amount of paperwork and expense to meet the good faith effort is a deterrent to doing work with Caltrans. The goals are no longer necessary. What matters is whether the contractor is qualified and most importantly the low bidder. CATA #6 noted that a small business outreach program is good and helping companies get bonded is good, but imposing hard and fast goals is unnecessary. "Race is not an issue here." "All small businesses have the same challenges, regardless of the race or ethnicity of the owner." He said race conscious programs are not helpful.

CATA #6 further stated that the goals are problematic due to how they are calculated. He said a DBE on their application is going to say that they can do work all over the place because they want to be considered for as many projects they can. He stated the reality is they will only go a certain geographic distance if the money is worth it. When establishing the goals, Caltrans looks at the list of DBEs and determines the level of DBE saturation in a particular area where the contract is going to take place. He said Caltrans is not considering two things when establishing the goal (1) the reality of the geographic capacity of the DBE to travel and (2) whether the DBE is working on another project and is even able to bid. So, the goal ends up "overly optimistic and nearly impossible for the contractor to meet. But they still have to go through all this effort to do the good faith effort . . . which leaves a bad taste in their mouth because they feel like they are doing more work for no benefit and that's why they don't like the program."

Some interviewees suggested a time limitation be placed on the DBE program. Interviewee #9, a white male-owned firm, stated that, fundamentally, he was not sure if he agrees with the DBE program. He did state that it should be "a time dependent function," such that a business should be accorded DBE status for only a limited period of time. According to Interviewee #9, "it's fine for you to have a DBE certification for a period of time," but that "after five years you need to be on your own, or your business should shut down."

Interviewee #5 suggests that Caltrans monitor DBEs, in order to ensure that businesses in the program are succeeding. He felt that the purpose of the DBE program should be to encourage self-sufficiency. Interviewee #5, a white female-owned firm, recommended that DBEs be put on a five to seven year track, and that they would have this number of years to demonstrate whether or not they could succeed (without DBE certification).

Reinstitute race and gender conscious goals.

Some businesses suggested reinstituting the race and gender conscious goals. CATA #4, an Asian American trade association, feels that race neutral measures aimed at increasing small business participation would work in some districts, such as Districts 4 and 7. Minority participation has not changed in these districts since the suspension of the goals. However, other districts, he said, still need race conscious programs. He stated minority participation has dropped in Districts 2 and 3 for example. The bottom line is that primes prefer to keep the work in house or if they have to use a sub, use one they are familiar with. There is a good ole' boy network whereby primes tend to use subs they have used for years. These firms socialize together and are part of the same community. DBEs have a difficult time breaking in.

CATA #12, an African American trade association, emphasized the importance of doing away with a race-neutral DBE program and go back to race-conscious one. He noted that people and other businesses base their attitude on how to deal with business based on how the government is dealing with those businesses. According to CATA #12, there "needs to be an incentive . . . especially nowadays." He said that there had been a "drastic drop" in DBE participation in Caltrans work after the program was suspended, because the incentive to use DBE firms is gone. Moreover, added CATA #12, it will take some time to get back to where things were before the program was suspended, and most people in the community do not even know about the program or that it has been suspended.

CATA #12 emphasized also the trickle down / multiplier effect of giving jobs to small businesses and DBEs instead of large contractors (who are often located and/or headquartered out of state), noting that when small businesses and DBEs get work, the money circulates throughout and provides benefits to the communities in which those businesses are located.

CATA #8, a Hispanic trade association, would like to see the goals reinstituted. He would like to see Caltrans “appoint a highly recognized engineer and assign responsibility and authority [to this engineer] to carry out” the program. He states that this engineer should “report directly to the Director.”

CATA #10, an Asian American trade association thinks "throughout the state there are many, many available, willing, and capable DBE firms but if Caltrans does not send the message to the big firms, they are not willing to team up with the small firms. But if Caltrans has the top commitment and sends the message to the larger firms [requirement of 10% goal or higher ("which would be better")] . . . if that message is there then you will see a big improvement on DBE participation."

CATA #3, a Hispanic trade association, is in favor of making the program "race-conscious." CATA #2, an African American trade association, said that the impact of not having any goals or preferences for firms owned by people of color and women can be seen in California by looking at the data from the awarding of public sector contracts in the pre-209 and post-209 eras, and that California was unique in this regard. According to CATA #2, a DBE program is needed because "without a program, the primes are just not going to do the right thing. They're just not."

Interviewee #19, a Hispanic male-owned firm, recommended that Caltrans and the State continue some sort of a DBE program and make it a percentage requirement as it was before. Interviewee #21, a Hispanic male-owned firm, recommends that the DBE program be reinstated as a requirement and to use companies like his for a single, paving or roadwork improvement opportunity. Interviewee #27, an African American male-owned firm, felt that the DBE program has "been a good program for [them]." She said that so far they had not seen a decrease in work after Caltrans suspended its DBE program, but he stated that there is "always a possibility that it's going to affect it."

Interviewee #31, an African American female-owned firm, stated: "Well, the heart of it is [that] if there are those firms that exist, if they do not continue to exist, then there will not be firms that can be contracted. Moreover, there will not be new firms coming up behind them. So if Caltrans is not making an effort to ensure that WMBEs not only have access to but actually are awarded contracts there will not be a Caltrans DBE program because there will not be any [DBEs]. I mean, bottom line is if you are without a contract, you are not going to be in business. I do not care what business you are in. If you do not have the work and if you do not get paid, you are not going to be in business."

Interviewee #39, a Hispanic male-owned firm, recommended that the DBE program be reinstated because, according to him, "small companies like us . . . without the DBE, we wouldn't even exist. It might be new companies want to start up; they'd find it hard." Interviewee #67, a white female-owned firm, said that dropping the DBE program would be an "insult" because it would show that Caltrans is not concerned about small businesses. She recommended Caltrans: keep the program; develop a good mentor/protégé program; do more outreach to, among other things, spread awareness of the program and work opportunities; and do a better job of communicating with small businesses and DBE firms.

CATA #1, an Asian American trade association, stated Caltrans should increase the DBE goals on its project. Interviewee #18, a Native American male-owned firm, recommends Caltrans allow DBEs to use its DBE status to meet the goal.

A small African American owned construction company who reported falsification of good faith efforts stated "my personal feeling is that it shouldn't be a goal. It should be a requirement." (P.H. San Diego, 3/22/07).

A Native American DBE stated, "In the last five years I have also lost contracts because I was not given preference for my DBE status with the qualifying TERO requirement of "On or Near the Reservation." He also stated: "This program must not be eliminated because it has made a difference." (Written testimony submitted 4/27/07).

Enforce DBE utilization.

Several interviewees recommended Caltrans track and monitor DBE utilization through final payment and provide sufficient staff and systems resources to oversee compliance (Interviewees #4, #6, #8, #38, CATA #1, #2, #4, #9). Caltrans should go behind good faith efforts to see that qualified and capable DBE firms were contacted and that DBEs included in the bids end up being utilized. The monitoring process should include participation by the contract manager, including reviewing substitution decisions by primes and auditing utilization goals on every contract. The monitoring process should also provide for subcontractor reporting (for example, notifying the subcontractors when payment is made to the prime or notifying the subcontract that it has been listed as a participant in a contract and allowing for response via a form).

CATA #2, an African American trade association, stated Caltrans should do a better job with contract compliance and making sure that DBE firms listed on bids are actually used for the work. According to CATA #2, Caltrans needs to do a better job of monitoring and enforcing prime contractors' good faith efforts. Interviewee #38, an Afghani male-owned firm, believes Caltrans and local agencies need to police prime contractors much more heavily to prevent discrimination against businesses such as his. CATA #1, an Asian American trade association, would like Caltrans to hold project manages and proposal reviewers more accountable for enforcing the DBE requirements. Caltrans should increase the staff in its civil rights department (in part to help firms that cannot get on the internet to look for contracts). Caltrans should implement a program and project goals for microbusinesses.

CATA #4, an Asian American trade association, stated that primes sometimes try to take the work away from the DBE firms and keep it in-house once the project has started. Contract Managers should monitor this and ask the primes the basis for these substitutions before allowing them. This decision should go through Caltrans not just the Contract Manager. CATA #9, an association of consulting, engineering, and land surveying firms, would like Caltrans to hold a prime contractor to the percentage it put in its bid.

Interviewee #6, a white female-owned firm, stated that Caltrans needs to re-evaluate its DBE program. Though speaking with respect to small business certification specifically, Interviewee #6 conveyed that more needs to be done than simply placing firms on a list, since being on a list does not necessarily mean that a firm will receive business, as reflected by the company's experience with Caltrans after receiving small business certification at the urging of a Caltrans employee.

Interviewee #8, a Hispanic male-owned firm, would like Caltrans to go behind the good faith efforts requirement and "make sure that if they have a DBE out there that's willing to do the work and put out good prices for it, that they don't get bypassed by the good faith effort." Interviewee #4, a Native American male-owned firm, stated: "The prime contractors that are bidding on public projects they seem much more interested in just making an initial contact that they can note in their records . . . rather than actually being interested in receiving bids from minority contractors. It seems more

important to them to just have a record that they actually called or sent a letter or a fax to a minority business more than being serious about receiving actual bids from them."

A representative of the Black Business Association of San Diego (an organization with 37 members) testified at a public hearing in San Diego that "we have many opportunities to bid on contracts . . . but as an end result the actual person that's working on the job is not the minority contractor. So one of the things I would recommend or suggest is that there can be something implemented as far as language, front-end, and back-end monitoring just to confirm that the actual worker in the end is a minority contractor." (P.H. San Diego, 3/22/07).

A representative of the Women Construction Owners and Executives testified at a public hearing in San Diego that pursuant to certain "listing laws" contractors are supposed to name all the subcontractors on the job at the time the contract is let. "Those don't always go down as far as they need to. And it's really a way to discriminate and eliminate and bid shop after a prime contract gets the job, with the listing law at the time of bid, and they show the amount of hours you're going to work or the amount of work you're going to do." (P.H. San Diego, 3/22/07).

Information regarding award of a bid.

Some interviewees suggested promptly informing all bidding contractors of the name of the company that won the contract. This would afford them the opportunity to raise any issues or problems as to the bid process and contract in a timely manner. Knowledge of successful bidders also encourages other companies to seek them out as potential partners in future contracts. Interviewees suggest informing contractors of the reasons behind their loss of the contract to promote review and growth. A Hispanic female-owned consulting firm stated, at a public hearing in Los Angeles, "firms have listed DBEs to meet contract-specific goals without notifying the respective DBEs that they were named in the bid or proposal." (P.H. Los Angeles, 4/4/07).

An SBE and DVBE landscape contractor, suggested rewarding those contractors who actually list DBE and DVBE subcontractors in the bid documents as those 'received and accepted' for execution of work as opposed to simply just recording good faith efforts. "Use a bid percent advantage for those who really use DBE's and DVBE's." (Written testimony submitted 3/15/07).

Increase outreach efforts such as training programs and job fairs.

Interviewees suggested Caltrans host industry-specific job fairs. This would allow vendors and contractors to use their time and money more efficiently by attending and marketing at only those events where others in their field are likely to be. Caltrans should encourage older, more established DBE businesses to attend DBE gatherings, as well as foster introductions between large and small contractors.

Interviewees said Caltrans should continue and further develop educational workshops on how to do business with Caltrans or how to submit bids. Caltrans should conduct targeted programs such as how to obtain certification, how to fill out bid forms, and how to navigate the Caltrans website. Caltrans could design programs to teach DBEs and small businesses how to compete in the private sector, including workshops on how to estimate costs and how to market effectively.

CATA #8, a Hispanic trade association, believes minorities are not given proper assistance in "understanding DOT procurement practices, documentation, and requirement. Because there are few avenues for help, minority contractors are stymied by the lack of assistance they get from procurement personnel. Often the only source of help is the engineering staff which is precluded from talking to the contractors once the bid 'hits the street.'"

He believes "minority contractors are discouraged from bidding on DOT jobs for many reasons and a few examples include lack of contracting information, inexperience in dealing with large organization structures, understanding government documentation, boilerplate, insurance issues, bonding requirements and short time bidding periods." He stated that "societal barriers make it difficult for DBEs to enjoy lunch, social events, drinks or hobnob with DOT engineers or prime contracts who can share technology or contracting practices."

Interviewee #34, a white male-owned firm, recommended sponsoring "large-scale contracting workshops that deal with the consulting sector as a whole," to have "targeted days or targeted workshops that [ar]e geared specifically toward the various disadvantaged business categories." Interviewee #34 noted that, currently, Caltrans' outreach "seems to be very project-oriented, as opposed to need-oriented," and he suggested that Caltrans' focusing its outreach on specific firms and/or specific services might be a better way of "getting the word out in terms of what the opportunities were."

Interviewee #79, an African American male-owned firm, suggested increasing the number of training programs. CATA #1, an Asian American trade association, would like Caltrans to offer education and training programs for small firms on how to use its software for design work so that these firms can better compete for Caltrans jobs. Interviewee #85, a white male-owned firm, would like Caltrans to sponsor a program on how to do business with Caltrans.

CATA #11, a minority trade association, would like Caltrans to facilitate meetings between general contractors and minority firms. His members often make business connections at their meetings. CATA #3, a Hispanic trade association, would like Caltrans to expand upon its outreach efforts, especially in the professional services area, and begin hosting and/or sponsoring quarterly mixers where Caltrans staff and officials, prime contractors, small businesses, and DBE firms can all come together to get to know each other and learn about upcoming work opportunities. Caltrans should also offer workshops on how to prepare and submit proposals that meet Caltrans' needs. In order to ensure clarity in the bid documents, Caltrans should have a panel of DBE firm and small business representatives review Caltrans' current RFPs and recommend improvements.

An African American consulting firm suggested, at a public hearing in San Diego, that the project managers and engineers attend the procurement fairs and roundtables. "You'll do the procurement fairs, but you go out . . . and you don't have the participants or the projects managers going. The next level is where you would have the project engineers at these events, you know, very, very much roundtables." He would also like to see more "informal meeting, either going out to lunch or in the office where it's one-on-one time or they are a member of the AGC and they are a member of an advisory committee . . . its' you and eight people and . . . the public agency basically asking every question they want to." (P.H. San Diego, 3/22/07).

A representative of BRIDGE, a Native American organization, stated, at a public hearing in San Diego, that DBE firms "don't market themselves correctly. They are not selling themselves to the primes correctly. And that needs to be looked at." (P.H. San Diego, 3/22/07). A white male-owned consulting firm testified, at a public hearing in Los Angeles, "you need to market yourself because being on the list is only the first step. You have to take an active role in knocking on doors like you would in any business and show your wares and discuss your expertise because that's what's going to get you the work." (P.H. Los Angeles, 4/4/07).

CATA #5, a trade association representing subcontractors, stated that "Caltrans could champion the success stories of the small businesses and minority owned firms. There's a lot of really good small contractors who would benefit from some exposure by Caltrans. I'm sure they do that somewhat now but there's got to be a way to bring some positive spin on all the accomplishments that these small firms have made. That would probably make the image of these smaller contractors better and make them more attractive to the generals." Caltrans could spot light these firms in a newsletter, or have a page on the website, or host a dinner to honor these firms.

Encourage mentor protégé relationships.

Interviewees urged Caltrans to continue and expand efforts to grow mentor-protégé programs, and communicate the need for mentors and protégés to Caltrans' contractors and vendors. (Interviewees #7, #15, #23, #27, CATA #7). Some interviewees suggested Caltrans monitor the pairings to ensure that each side is receiving the full benefit of the relationship.

Interviewee #15, a white male-owned firm, strongly favored reinforcing and strengthening the mentoring and joint venture aspects of the DBE program. He had not heard of these efforts. He felt that if bidders who participated in such arrangements were given extra points by the agency (Caltrans or a local agency), that this could make a huge difference in helping DBE's to grow and understand how to do large projects.

Interviewee #47, a white male-owned firm, stated that the consulting community is ready and willing to work with Caltrans to improve small business participation. Caltrans should establish more outreach efforts aimed at putting large businesses into contact with small businesses to assist them in growing. The mentoring program is a good start.

Interviewee #7, a white female-owned business, would like Caltrans to establish more training programs where training was done by the firms themselves. He suggested Caltrans could improve upon the apprentice program and have 20% of people working on any job (particularly those working as landscape inspectors) be working as apprentices. Doing so would lower the cost to Caltrans and that "everybody would benefit." Though he said "it's not a DBE issue," he noted that "it could help DBE firms increase their size."

Interviewee #23, an Asian American male-owned firm, recommended Caltrans encourage bids for large contracts by joint ventures between small companies and between small and large companies. This was a successful model that has worked at BART. Caltrans should encourage small companies to be primes and large companies to be subs via official policy. Caltrans should insure that these policies are actually implemented at the project manager and contracting level.

Communication.

Interviewees suggested Caltrans advertise and promote the DBE program. As part of this effort, Interviewees said Caltrans should inform businesses of the Caltrans contractor directories and encourage prime contractors to use the directories to find quality DBEs and small businesses. They stated Caltrans should keep the directories current and accurate and provide methods whereby vendors and contractors can easily submit updated information. Interviewees suggest Caltrans could collaborate with trade organizations to create a comprehensive directory.

Interviewee #85, a white male-owned firm, would like to see Caltrans giving more publicity to the SBE and DBE programs. He does not feel that business understand these programs or understand that they can receive premiums by using SBE companies. He does not feel that business know how to locate SBEs or DBEs if they wanted to. CATA #3, a Hispanic trade association, would like Caltrans to publish and publicize a comprehensive directory listing DBEs categorically, both alphabetically and by the services they provide. Interviewee #68, a white male-owned firm, recommended making contractors and vendors more aware of the DBE program.

Some interviewees suggested greater communication and notification of opportunities to work with Caltrans. CATA #11, a minority trade association, believes the main barrier in his members pursuing Caltrans work is lack of knowledge. He would like Caltrans to publicize all their projects in a very open manner and provide a complete description of the scope of work (not just a one liner like "ramp widening"). He would like Caltrans to tell contractors where to pick up the plans and who they can go to with questions.

Interviewee #46, an Asian American male-owned firm, said that "the important issue is communication." He stressed that it is important for Caltrans to make available to businesses someone with whom they can talk in person and suggested that Caltrans could create liason or outreach officers that would be assigned to different categories or alphabetical groupings of companies. Similarly, CATA #4, an Asian American trade association, suggests Caltrans establish a professional liason committee that would let SBEs know about contract opportunities sooner and put them on more equal footing with the big firms.

Interviewee #44, a Middle Eastern male-owned firm, recommends that Caltrans focus on improving its methods of communication with contractors. He wishes that Caltrans advertised bidding opportunities more prominently and were otherwise engaged in efforts to make sure small businesses knew about them. CATA #1, an Asian American trade association, suggested Caltrans implement an "e-blast" system (like it used to have with "fax-blast") for advertising its jobs. Interviewee #38, an Afghani male-owned firm, believes Caltrans and local agencies need to communicate better and more with businesses such as his, that are at the bottom of the hierarchy.

Interviewee #43, a Native American male-owned firm, recommends that Caltrans have “more of a focused effort to reach out to” the new minority businesses that have not done business with Caltrans before. He believes that they would probably be less sophisticated and would therefore require more help. Specifically, he recommends that Caltrans look at the databases of certified minority businesses and send out letters of the name/contact information of someone that could mentor a certified business that has never done business with Caltrans before to help navigate Caltrans’ complex bidding process. Interviewee #67, a white female-owned firm, recommended that Caltrans do a better job of outreach and notification.

Interviewee #57, an Asian American male-owned firm, wants to see DBEs "get to know Caltrans." If Caltrans could come up with some ideas where they know which DBEs are trusted and what projects have been successful in the past with particular DBEs, Caltrans could essentially direct bid to smaller companies. He also wants Caltrans to ensure that when big contracts come out, the same DBEs are not being used for each contract. Also, the outreach needs to be more meaningful – when he attended one of the Caltrans sessions years ago, he was told that no one at the session was a decision maker; he felt like his time had been wasted.

Partnerships with trade associations.

Some trade associations suggested Caltrans develop a formal partnership in order to reduce duplicative efforts and enhance the effectiveness of Caltrans' program. They point out the officials and administrators working for Caltrans appear to have many connections with area trade associations, but there is no formal line of communication that holds a specific office or official responsible for maintaining these relationships and utilizing their expertise. These associations suggested this formal relationship could include convening quarterly meetings in which Caltrans offers an open invitation to trade associations to discuss all entities' programs and outreach. This partnership, they recommended could also coordinate the certification process between the trade associations and Caltrans to reduce redundancy. They suggested Caltrans could advertise and encourage businesses to attend events hosted by trade organizations, as well as inform vendors and contractors of the variety of trade organizations and their individual missions.

CATA #4, an Asian American trade association, would like Caltrans to develop relationships with local trade associations. He believes that Caltrans' philosophy is that “you come to us and we’ll tell you what you have to do.” The Small Business Council has encouraged Caltrans to work more closely with the trade associations. He said Caltrans should send their contract managers to the trade associations’ annual or monthly meetings to inform their members on how to do business with Caltrans and upcoming opportunities in their fields. CATA #4 stated that right now, Caltrans programs are tailored more for entry level firms, not for more seasoned firms.

Simplify or streamline the bidding process.

Some Interviewees recommend Caltrans should make drawings and bid papers more accessible and more affordable by developing an electronic format (available through the internet or on cd-rom). These interviewees said the goal should be to reduce the cost burden placed on contractors while maintaining an effective and fair bidding process. Some of the issues these interviewees say to consider include 1) whether the number of copies required to bid can be reduced; 2) whether answers to some of the information required at the initial bid (i.e. bonding) can be postponed until the contractor moves a step closer to successfully winning the bid; and 3) whether the standard forms and process are appropriate for distinct procurement categories.

Selection criteria.

Several interviewees offered suggestions regarding Caltrans selection criteria and bid requirements. Interviewee #58, a white female-owned firm, recommends that the auditing and accounting information requested in the Caltrans proposals be eliminated. She indicates that you have to share a lot of information about employees and rates that she considers to be very confidential.

Interviewee #50, a white male-owned firm, feels that Caltrans method of selecting consultants is not driven by qualifications. Instead, you get the contract merely because you are next on the short list. Interviewee #50 recommends prequalifying firms for work up to a certain amount of money and have Caltrans select the right consultant from that group based on the project at hand.

CATA #7, a Filipino trade association, would like Caltrans to change the criteria requiring Caltrans experience to a criteria requiring relevant experience. If a contractor has experience in the private sector doing the same kind of work, they should be considered by Caltrans even if they have not done work for Caltrans in the past. CATA #4, an Asian American trade association, echoed this sentiment, stressing that comparable experience should be considered.

Interviewee #11, a Native American male-owned firm, stated that, during the interview process, Caltrans interviewers should be allowed to ask a couple of follow up questions instead of completely sticking to the script questions, so that there is more interaction and the quality of the team comes through.

Interviewee #82, a white male-owned firm, recommends that Caltrans give more consideration to alternative proposals that would achieve the same objective, instead of being so insistent with complying with the specifications.

CATA #8, a Hispanic trade association, suggested that "procurement personnel be measured by their minority business results as well as budget, schedules, quality, etc." This is a way of encouraging Caltrans contractors to go beyond their comfort zone and pick smaller, unknown DBE firms as opposed to the large contractors with many years of Caltrans experience.

CATA #12, an African American trade association, recommended that Caltrans continue with its trade shows, and that it educate the directors in the different districts and evaluate them based on small business and DBE/WBE/MBE participation and based on their outreach to and their involvement with and of the community. CATA #12 said that the Caltrans district directors need to have the same passion for DBE and small business participation as the overall director of Caltrans.

Auditing and pricing.

Interviewee #47, a white male-owned firm, has various suggestions related to rates and negotiations. The "negotiations process needs to be refined and improved." "When you are selected as a consultant you go into a round of negotiations that defines your rates." These are the labor rates, the fee, the overhead, and the labor escalation for each year. Right now they are being treated differently in different districts. Some districts are "driving a really hard bargain relative to the market prices." They are trying to address this with Caltrans through professional organizations. "In their selection process they have number one, number two." If Caltrans cannot reach an agreement with number one, they will move onto number two. He said Caltrans is using size to establish fees and escalation rates that do not match what firms are paying employees. He stated you either agree to Caltrans pricing or you have to decline the contract.

According to Interviewee #47, Caltrans will not allow mark-up on the work of DBE firms in the professional services arena like they do in the construction arena. If you use a professional service subcontractor, you must bill them out to Caltrans at cost and cannot mark up their price. Interviewee #47 said this reduces the incentive for primes to use DBEs in the professional services arena. He

stated primes would prefer to keep the work in-house where they can make a profit on it. The Washington Department of Transportation, Interviewee #47, just recently changed their policy to allow sub-mark ups resulting from discussions on how to increase DBE participation. Interviewee #47 suggested Caltrans should allow some mark up and the escalation rate to increase by the year.

CATA #4, an Asian American trade association, stated that the Caltrans auditing process is untimely. He recommends Caltrans try to speed up the auditing process so the firm can decide if it wants to do the work or adjust its actions accordingly. Caltrans, he said, will not take the results of other agencies' audits, whereas other agencies accept other agencies' recommendations. It is fine if Caltrans wants to do their own auditing, but CATA #4 said they should do it in a timely manner. He also notes that the appeal procedures are difficult, particularly for small firms without accounting and legal departments.

Interviewee #33, a Hispanic female-owned firm, also recommends improving Caltrans auditing practices. Caltrans should reconsider the hourly rates that firms are allowed to charge and the process for calculating these rates. Interviewee #33 suggested that Caltrans' audits, specifically with respect to hourly rates, should be easier to appeal.

Payment.

CATA #4, an Asian American trade association, stated that although Caltrans has a prompt payment policy, primes often pay their subcontractors late. If the subcontractor goes over the prime contractor and complains to the Contract Manager, this makes the subcontractor look bad. He said the Small Business Council would like Caltrans to adopt a policy whereby the prime must get a verification of payment on the previous invoice to the subcontractor before Caltrans will pay the primes next invoice. According to CATA #4, Caltrans said they would have their legal department look into this, but the Small Business Council has not heard anything yet since proposing the idea.

An African American DBE consulting firm suggested that Caltrans publish payment to the primes on the website. "It's kind of an alert, oh, look, this guy got paid, he's got ten days to go and give me my money." (P.H. San Diego, 3/22/07).

An African American DBE trucking company who testified at a public hearing in San Diego suggests that Caltrans make it mandatory for primes to place a preliminary lien on a job to ensure prompt payment. He testified that "when we work for Caltrans or contractors … we pretty much bankroll the trucking for the company, and it takes 60 to 90 days to get our money .. if we prelim [preliminary lien] it, I become blackballed, because contractors don't like trucking company to prelim the job … it's a lot of extra paperwork, but it protects me in getting my money." (P.H. San Diego, 3/22/07).

Certification.

Interviewees suggested that Caltrans provide reciprocity to contractors who have successfully certified with other governmental agencies within the state. They recommend Caltrans collaborate with other agencies to create a consistent format for certification application and evaluation.

CATA #2, an African American trade association, believes Caltrans should provide more staff to deal with certification and require all businesses – both DBE firms and non-DBE firms – to go through a certification process before they can work on Caltrans jobs. CATA #3, a Hispanic trade association, suggests Caltrans implement self-certification for DBEs. Several firms suggested Caltrans relax the recertification requirements.

Interviewee #11, a Native American male-owned firm, would like greater communication during the certification process. He would like a company to be able to track the status of their application to alleviate concerns regarding its progress.

Interviewee #31, an African American female-owned firm, suggested that Caltrans could improve its recertification process by requiring only that businesses submit a certified affidavit saying that nothing had changed regarding a company's ownership. Interviewee #49, an African American male-owned firm, also recommended improving the recertification process by allowing businesses to certify that their business ownership and the like has not changed in the past year, rather than going through the whole process again.

Diversify Caltrans staff.

Some interviewees suggested Caltrans should ensure staff within the offices, committees and other working groups charged with promoting diversity within Caltrans' contracting/ procurement reflect the diversity of Caltrans. Specifically, they suggest Caltrans devote resources for encouraging greater participation of Hispanic, Asian American, Native American, and other minority groups as Caltrans staff.

CATA #7, a Filipino trade association, suggested having a Caltrans official from another district on the selection committee as well as a professional service provider from another area. He thinks this would help the Selection Committee to be more open minded. He said the selection committee develops biases in favor of certain firms. CATA #7 recommended that increasing diversity on the selection committee would make a more level playing field and perhaps encourage Caltrans to work with new firms.

Bonding, financing, and insurance.

Interviewees suggested Caltrans should advertise, promote, and expand programs aimed at assisting small business obtain bonding, insurance, and financing. (Interviewees #42, #64, #75, CATA #2). Very few interviewees were aware of any programs by Caltrans to assist with bonding, insurance, or financing. Interviewee #75, a white male-owned firm, feels Caltrans should provide bonding for the contractors who win the bids; otherwise, most small businesses are shut out from participating in Caltrans projects. CATA #2, an African American trade association, suggested Caltrans implement a system under which prime contractors cover bonding and insurance for their subcontractors. Interviewee #42, an African American male-owned firm, would like Caltrans to help with bonding. Interviewee #64, a white male-owned firm, suggests Caltrans make the engineers' estimates tighter so bonding capacity is not unnecessarily taken up.

Interviewee #29, a Hispanic male-owned firm, believes that the mentor program is helpful for obtaining bonding because the bond capacity of the mentor can be used under most mentor programs. Furthermore, the bundling issue affects the ability for companies to be within reach of obtaining the projects as a prime because the jobs are so large, it is very difficult if not impossible to finance.

CATA #2, an African American trade association, stated that it was difficult for the Association's members to get bonding and that he thought that prime contractors should do a better job in this area. He queried why, if a prime contractor has a bond, a subcontractor also needs one, and why, even if the subcontractor is required to carry a bond, the sub's bond needs to be in the same amount as the prime's. CATA #2 indicated that obtaining financing was not as big an issue for the Association's members as is obtaining bonding. He said that if a company has been in business, it generally has a line of credit, but that the difficulty is getting the business experience in the first place and building one's business to the point where (s)he can put up its or other assets to secure financing. He said that the state bonding program is good but expensive, and that the Association had addressed the issue of bonding with Caltrans, along with the prompt payment issue. He said that bonding, financing, and payment issues are big issues now and were big issues when the program was in place. He also said that a company's landing a contract helps it to better deal with these issues (e.g., a company that receives money on a contract can use some of this money to pay for a bond) but that a DBE program is needed in order for more businesses to get contracts.

CATA #10, an Asian American trade association, said the U.S. DOT used to have the transportation loan program, as did the Small Business Administration Program. He stated financing is available but you lose a percentage of your profit.

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APPENDIX J.
FTA-Funded Contracts

Caltrans administers grants to local agencies that involve Federal Transit Administration funds. Therefore, Caltrans must implement a Federal DBE Program for FTA-funded contracts. Larger transportation agencies such as BART are direct recipients of FTA funds and therefore are directly responsible for implementation of the Federal DBE Program related to these contracts.

In past implementation of the Federal DBE Program related to FTA-funded contracts, local agencies could set DBE contract goals for contracts that included meaningful subcontracting opportunities. Caltrans currently implements an all-neutral Federal DBE Program for these contracts.

BBC reviewed Disadvantaged Business Enterprise Program Reports submitted to Caltrans by local agencies for April 1 through September 30, 2006. These reports examined $82 million in contracts using FTA funds. Most of the dollars involved in these contracts were for purchases of transportation equipment (more than 50 percent), mobility services (more than one-quarter), fuel and miscellaneous goods and services from tires to security contracts. Less than 8 percent of the contract dollars were for construction or engineering services.

BBC's availability analysis was designed to examine all transportation-related construction and engineering, and therefore is pertinent to FTA-funded construction and engineering contracts. However, most of the procurements made with FTA funds are not related to construction or engineering. The largest area of purchases, transportation vehicles, is subject to a national transit manufacturer program that encourages use of DBE suppliers in the manufacture of buses and other equipment. The second largest area of purchases, contracts with private vendors to operate bus, van and other services, is one that is characterized by very limited availability of potential vendors.

As noted previously in the body of the report, Caltrans does not maintain an effective database of potential bidders on transportation-related work that could be used to examine availability for FTA-funded contracts.

For these reasons, BBC recommends that Caltrans not apply the availability information developed for the transportation contracting information in this report when developing the overall annual DBE goal for FTA-related contracts. Caltrans should consider applying the national DBE goal for FTA-funded contracts and continue to encourage DBE participation through race- and gender-neutral means. Caltrans' future development of a comprehensive bidders list should include firms available to perform different types of work related to FTA-funded contracts.