

# Dallas Fort Worth International Airport Disparity Study 2019





# DALLAS FORT WORTH INTERNATIONAL AIRPORT

## DISPARITY STUDY 2019

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## About the Study Team

**Colette Holt & Associates** (“CHA”) is a national law and consulting firm specializing in disparity studies, affirmative action contracting programs, expert witness services, compliance monitoring and strategic development related to supplier diversity initiatives. Founded in 1994, it is led by Colette Holt, J.D., a nationally recognized attorney and expert. In addition to Ms. Holt, the firm consists of Steven C. Pitts, Ph. D., who serves as the team’s economist and statistician; Ilene Grossman, B.S., CHA Project Administrator; Glenn Sullivan, B.S., CHA Director of Technology; Victoria Farrell, MBA, CHA Assistant Principal Researcher; and Joanne Lubart, J.D., Special Counsel. CHA is certified as a Disadvantaged Business Enterprise, Minority-Owned Business Enterprise and a Woman-Owned Business Enterprise by numerous agencies.

**Nervi’ Strategic Solutions, LLC** (SBE) strategically aligns disadvantaged, minority, women and small companies to compete in today’s challenging contracting industry in both the private and public environments. President Pam Ervin-Davis has over 25 years of experience in supplier diversity and has worked with partnerships of D//M/W/SBEs in all industries.

**MRR & Associates, LLC** (SBE) focuses on advocating for the needs of underserved business sectors at the local and national levels and is a leader in community outreach and engagement. Minerva Rodriguez, President & CEO, brings to bear years of experience in business affairs in the Dallas area, in Texas, and on the national and international arenas.

## Acknowledgements

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# I. EXECUTIVE SUMMARY

## A. Study Methodology and Data

Colette Holt & Associates (CHA) was retained by the Dallas Fort Worth International Airport (“DFW” or “Airport”) to perform a study regarding its Disadvantaged Business Enterprise (“DBE”), Airport Concession Disadvantaged Business Enterprise (“ACDBE”), Minority- and Women-Owned Business Enterprise (“M/WBE”) programs. The methodology for this study embodies the constitutional principles of *City of Richmond v. Croson*, *Adarand v. Peña*, Fifth Circuit Court of Appeals case law, U.S. Department of Transportation (“USDOT”) guidance, and best practices for designing race- and gender-conscious and small business contracting programs. The CHA approach has been specifically upheld by the federal courts. It is also the approach developed by Ms. Holt for the National Academy of Sciences that is now the recommended standard for designing legally defensible disparity studies.

We determined the Airport’s utilization of DBEs, ACDBEs and M/WBEs during the years 2012 through 2017; the availability of these firms as a percentage of all firms in DFW’s geographic and industry market areas; and any disparities between DFW’s utilization of M/WBE on its locally-funded contracts and M/WBE availability. We further analyzed disparities in the wider economy, where affirmative action is rarely practiced, to evaluate whether barriers continue to impede opportunities for minorities and women when remedial intervention is not imposed. We further gathered anecdotal and qualitative data about the experiences of minority- and women-owned firms in obtaining DFW contracts and associated contracts and concession opportunities. We evaluated DFW’s programs for conformance with constitutional standards, national best practices, and the DBE and ACDBE program regulations.

Based on the results of these extensive analyses, we made recommendations for the Airport’s business diversity programs.

## B. Legal Standards<sup>1</sup>

To be effective, enforceable, and legally defensible, a race-based program for public sector contracts, regardless of funding source, must meet the judicial test of constitutional “strict scrutiny”. Strict scrutiny is the highest level of judicial review.

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1. Please see Chapter II.

DFW Airport must meet these tests to ensure its programs remain in legal compliance.

Strict scrutiny analysis has two elements:

1. The government must establish its “compelling interest” in remediating race discrimination by current “strong evidence” of the persistence of discrimination. Such evidence may consist of the entity’s “passive participation” in a system of racial exclusion.
2. Any remedies adopted must be “narrowly tailored” to that discrimination; the program must be directed at the types and the depth of discrimination identified.

The compelling governmental interest requirement has been met through two types of proof:

1. Statistical evidence—disparity analyses—of the underutilization of minority or women firms by the agency and/or throughout the agency’s geographic and industry market area compared to their availability in the market area.
2. Anecdotal evidence of race- or gender-barriers to the full and fair participation of minority- and women-owned firms in the market area and in seeking contracts with the agency. Anecdotal data can consist of interviews, surveys, public hearings, academic literature, judicial decisions, legislative reports, and other information.

The narrow tailoring prong has been met by satisfying five factors to ensure that the remedy “fits” the evidence:

1. The necessity of relief;
2. The efficacy of race-neutral remedies at overcoming identified discrimination;
3. The flexibility and duration of the relief, including the availability of waiver provisions;
4. The relationship of numerical goals to the relevant market; and
5. The impact of the relief on the rights of third parties.

Classifications not based upon a suspect class (race, ethnicity, religion, national origin or gender) are subject to the lesser standard of review called “rational basis” scrutiny. Thus, preferences for persons with disabilities or veteran status may be enacted with vastly less evidence than that required for race- or gender-based measures meant to combat historic discrimination.

To meet strict scrutiny, studies have been conducted to gather the statistical and anecdotal evidence necessary to support the use of race- and gender-conscious measures to combat discrimination. These are commonly referred to as “disparity studies” because they analyze any disparities between the opportunities and



experiences of minority- and women-owned firms and their actual utilization compared to White male-owned businesses. Quality studies also examine the elements of the agency's program to determine whether it is sufficiently narrowly tailored. This Report meets these tests.

## C. Study Findings

### 1. DFW's Business Diversity Programs<sup>2</sup>

The Airport administers four business diversity programs to promote competitive and fair contracting opportunities: (a) the Disadvantaged Business Enterprise ("DBE") Program, (b) the Airport Concessions DBE ("ACDBE") Program; (c) the Minority- and Women-Owned Business Enterprise ("M/WBE") Program and (d) the Small Business Enterprise ("SBE") Program. The Business Diversity and Development Department ("BDDD") is responsible for the overall implementation of the programs, working closely with user departments and Airport officials.

#### a. DFW's Disadvantaged Business Enterprise Program

As a recipient of US Department of Transportation ("USDOT") funds through the Federal Aviation Administration ("FAA"), DFW is required, as a condition of receipt, to implement a DBE program in compliance with 49 C.F.R. Part 26.<sup>3</sup> The Airport administers a DBE Program Plan based upon the samples and guidance from the USDOT. This Plan was approved by the FAA in 2013 and contains all the required elements. As part of the Plan, DFW is required to submit a triennial DBE goal to the FAA, which is currently 21 percent. The Vice President of the Business Diversity and Development Department ("BDDD") serves as DFW's DBE Liaison Officer ("DBELO") and is responsible for implementing all aspects of the DBE program.

BDDD sets contract-specific goals based on the scope of work, the location of the work, and the availability of DBEs to perform the particular type of work in setting contract goals.

DFW is a non-certifying member of the Texas Unified Certification Program ("TUCP"). The TUCP includes six certifying agencies that have executed a memorandum of agreement to perform DBE certifications for the State of Texas. Certification decisions are based upon the eligibility standards set forth in Part 26. To qualify for DBE certification, an applicant firm must

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2. Please see Chapter III.

3. 49 C.F.R. §§ 26.3 and 26.21.

demonstrate that it is a for-profit small business concern, at least 51 percent owned and controlled by socially and economically disadvantaged individuals. DFW maintains a directory that includes certified firms for each of its business diversity programs.

DFW follows the Good Faith Effort (“GFE”) guidance set forth in Appendix A of Part 26 as its reference and guide for evaluating all GFEs. The bidder/offeree Schedule of DBE Participation is required as a matter of responsiveness. The bidder/offeree, including DBEs, must meet the DBE contract goal or document adequate good faith efforts (“GFEs”) to do so. Prime contractors must make GFEs to replace a DBE that is terminated or that has otherwise failed to complete its work on a contract with another DBE, to the extent required to meet the contract goal.

In conformance with Part 26, prompt payment and release of retainage obligations are set forth in all FAA assisted contracts. A finding of non-payment constitutes a material breach of contract. The Airport performs interim audits of contract to review payments to DBE subcontractors to ensure that the actual amount paid to DBE subcontractors equals or exceeds the dollar amounts stated in the commitment. DFW uses the B2Gnow electronic data collection and monitoring system to track payments.

DFW conducts commercially useful function (“CUF”) reviews. Considerations include the scope of work, management, work performance, and on-site equipment to determine whether the DBE is an independent business performing, managing, and supervising the work specified in its contract. A non-exhaustive list of DBE GFEs is set forth in the specifications, the content of which is derived from Appendix A of Part 26.

DFW provides a variety of outreach and training opportunities, as well as financial/technical assistance for DBEs. It conducts industry-specific outreach as well as meet and greet sessions. The Airport also partners with community organizations to build an airport that reflects the communities and customers it serves.

**b. DFW’s Airport Concessions Disadvantaged Business Enterprise Program**

Since DFW operates a large hub primary airport, it is required to establish an Airport Concession Disadvantaged Business Enterprise (“ACDBE”) program in accordance with 49 C.F.R. Part 23 (“Part 23”). DFW’s revised ACDBE Program and Policy was approved by the FAA in 2013. The Vice President of BDDD is the Airport Concession Disadvantaged Business Enterprise Liaison Officer (“ACDBELO”). For federal fiscal years 2017-2020, the ACDBE goal for non-car rental concession contracts is 33 percent and the ACDBE goal for car rental concession contracts is one percent.

To be certified as an ACDBE, an applicant firm must meet the Part 26 eligibility standards as well as the following Part 23 business size requirements. As with the DBE program, DFW accepts the certification of the TUCP.

DFW applies policies similar to the DBE program for GFEs, CUF reviews, substitutions, and other program elements, to the ACDBE program.

**c. DFW's Minority- and Women-Owned Business Enterprise Program**

DFW's M/WBE Program for its locally-funded contracts is contained in the 2012 M/WBE Policy Statement and is based upon the Airport's 2010 Availability and Disparity Study. BDDD is responsible for the implementation of the M/WBE program. BDDD may adjust annual goals to ensure they are based on strong evidence. The goal must be based on the total dollars spent annually for construction and construction-related professional services contracts and the availability of MBEs and WBEs to perform these contracts.

**i. Eligibility Requirements for the M/WBE Program**

DFW provides stringent criteria for participation in the M/WBE program. A Minority Business Enterprise ("MBE") is defined as a "for-profit" independent business concern, at least 51 percent owned and controlled by one or more U.S. citizen(s) or lawfully-admitted permanent resident(s) that are members of the following groups: Black Americans, Hispanic Americans, Asian Pacific Americans, Subcontinent Asian Americans, or Native Americans. A Women Business Enterprise ("WBE") is defined as a "for-profit" independent business concern, at least 51 percent owned and controlled by one or more U.S. citizen(s) or lawfully-admitted permanent resident(s) who is female.

Qualifying firms must establish a place of business within DFW's market area at the time that the firm is submitted for credit toward a contract goal. The firm's owner must possess the requisite training and expertise to perform the main functions of the firm, and where required, have a license or certification issued in his or her name. A firm receives certification in the appropriate North American Industry Classification System ("NAICS") code(s) for its work type(s) or industry. As firms grow and expand, they are afforded the opportunity to request additional NAICS codes. DFW maintains a current directory of MBEs and WBEs. Bidders are required to use the directory to assist them in locating qualifying firms for the work required on the contract.

In order for its participation to be counted toward a contract-specific goal, the MBE or WBE must be certified at the time of bid/proposal submission by the North Central Texas Regional Certification Agency,

the Dallas Fort Worth Minority Supplier Council, the Women's Business Council Southwest, the State of Texas Small Business Enterprise Program, the Texas Unified Certification Program, or the Small Business Administration's 8(a) Certification Program.

**ii. Setting M/WBE Goals**

Since the 2010 Disparity Study failed to find sufficient evidence of discrimination against White females in DFW's construction market, they are not included in remedial goals for construction in the M/WBE Program. Contract goals on construction contracts are set for only racial and ethnic minorities. For each fiscal year, BDDD may establish an annual aspirational percentage for overall MBE prime and subcontract participation on construction contracts and overall M/WBE participation on Construction-related Professional Services Contracts (Architectural and Engineering). The aspirational goal is adjusted by BDDD on an annual basis based upon the most accurate availability data available.

The procurement of goods and services are subject to different guidelines based upon the industry value of the purchase and the circumstances under which a procurement is made. BDDD evaluates each locally-funded contract to determine the best method to enhance M/WBE participation to be counted towards the achievement of annual Small Business Enterprise ("SBE") or M/WBE goals and other program objectives.

BDDD reviews each bid or proposal for suitability for setting contract goals. The contract goal is not intended to function as a quota or set-aside. There must be at least three available MBEs or WBEs in the anticipated subcontractable scopes of work and located in DFW's market area. Only certified firms are counted towards satisfaction of M/WBE goals.

For contracts with an estimated value between \$3,000.00 and \$50,000.00, bids or quotes must be solicited from two firms certified as Historically Underutilized Businesses ("HUBs") by the State of Texas. Contractors must also contact and solicit bids from at least two SBEs and/or M/WBEs.

For contracts with an estimated value greater than \$50,000.00, the Procurement and Materials Management ("PMM") Department, collaborating with BDDD, reviews all requests to establish goals. DFW also requires that PMM contact two SBEs to make them aware of the opportunity.

Based on the 2010 Disparity Study, the Airport established a program to set contract goals on construction contracts for only racial and ethnic minorities; White women are not eligible to be counted towards goals. For each fiscal year, BDDD may establish an annual aspirational percentage for overall MBE prime and subcontract participation on construction contracts.

BDDD sets goals on a contract-by-contract basis to reflect the relative availability of M/WBEs to perform commercially useful functions. M/WBE prime contractors may count 100 percent of their self-performance. DFW uses the provisions in 49 C.F.R. § 26.55 for counting purposes.

For each fiscal year, BDDD establishes an annual aspirational goal for overall M/WBE participation on architectural and engineering (“A & E”) contracts. BDDD also establishes goals on A & E projects on a contract-by-contract basis. Factors considered, included the relative availability of these firms to perform a commercially useful function on the specific contract. All certified M/WBEs are eligible to be counted towards credit for meeting goals on these contracts.

### **iii. Meeting M/WBE Program Requirements**

Contractors are encouraged to attend “How to Do Business with the Airport” seminars, as well as industry-specific outreach meetings and pre-bid/pre-proposal meetings.

The specific goal for a contract is stated in the Advertisement and Invitation for Bid and is established by DFW’s policies.

Submission of the *Intent to Perform as a Subcontractor* form for each M/WBE firm constitutes a representation by the contractor that it believes the M/WBE to be certified and that it has a place of business in DFW’s market area. This form must list all subcontractors on the project and detail the preliminary percentage and dollar commitment of the contractor to M/WBE participation. For contracts involving alternative delivery methods (e.g., Design-Build or Construction Management-at-Risk), BDDD may determine the requirements to address the goal by means of a compliance plan, or alternative demonstration of good faith efforts (“GFEs”).

A contractor must either meet the contract goal or demonstrate its GFEs to do so. BDDD will consider only those documented efforts that occurred prior to the GFE submission. Contractors must make GFEs in conformance with the DBE program regulations.

The contractor has a continuing obligation as a covenant of performance to meet the utilization goal to which it committed at contract award, inclusive of change orders, amendments, and modifications. If the contractor, during contract performance, must replace a firm for any reason, it is obliged to follow DFW's provisions governing substitution and to document GFEs to meet its original contractual commitment.

All covered contractors must comply with the Texas Prompt Payment Act. All invoices in compliance with contract payment terms and conditions are to be paid within 30 days of receipt.

As with the DBE and ACDBE programs, BDDD determines whether the certified firm is performing a commercially useful function ("CUF"). A firm performs a CUF when it is responsible for a discrete task or sequence of tasks using its own forces or by proactively supervising on-site execution of tasks. A firm must be certified in the North American Industry Classification System ("NAICS") code(s) for the scope of work performed, in order for the prime contractor to receive credit towards meeting the applicable goal. Work that a certified firm subcontracts to a non-certified firm does not count for DBE credit.

A CUF audit is performed to determine the appropriate credit for work performed by the MWSBE to prevent fraud and to ensure program integrity. DFW uses a CUF Worksheet that requires reviewers to answer specific questions.

DFW's Audit Services Department provides audit assistance, as necessary, to determine compliance with M/WBE business processes. It assesses and makes recommendations (when requested) on the utilization of M/WBEs, including but not limited to, allegations of fraud.

Failure to meet M/WBE contractual commitments or any other aspect of program requirements, constitutes a material breach of contract and entitles the Airport to exercise contract remedies, program requirements, or applicable law.

#### **iv. Capacity Building, Training and Outreach Activities**

A major objective of DFW's programs is to build the capacity of certified firms. DFW offers a robust litany of programs that provide training and outreach for M/WBEs. Topics include joint venture agreements, the procurement process, DFW audits, succession planning and business valuation solutions. The Airport also conducts networking sessions, luncheons, informational meetings, and pre-bid conferences.

Race- and gender-neutral measures include:

- The *Meet and Greet Program*, which offers an introduction to DFW goods and services.
- The *LiftFund* program, in which DFW partners with LiftFund and National Insurance Consultants to offer a Technical Assistance/ Loan Pilot Program to provide instruction, training, technical assistance, and support services to M/WBEs currently doing business with DFW and workshops on capital options and business loans.
- The *Rolling Owner Controlled Insurance Program* that provides safety management, site control, insurance cost savings, and the ability to mitigate losses for contractors and includes application of coverage to multiple and sizeable construction projects.
- The *Capacity Building Alliance Program*, which is a volunteer mentor protégé program for DFW's Terminal Renewal and Improvement Program. This program provides select contractors with one-on-one technical training and resources.
- *Minority Chamber/Advocacy Organization Partnerships* to increase the success of DFW's community outreach program.
- The *Capital Assistance and Bonding Program*, which offers workshops on business planning and management; banking, finance and access to capital; and principles of accounting and financial statements.
- The *Champions of Diversity Award* that honor companies that partner with DFW and go above and beyond in advancing diversity and inclusion.

**d. DFW's Small Business Enterprise Program**

In addition to the M/WBE program, BDDD administers a race- and gender-neutral Small Business Enterprise ("SBE") Program for locally funded construction contracts under \$1 million and for professional and non-professional services. DFW added the SBE program to its existing programs in 2012 based upon the 2010 supplement to the Disparity Study, which failed to find sufficient evidence of discrimination to support a race- and gender-conscious program for these types of contracts.

An SBE is a small business concern as defined in the Small Business Administration regulations that also does not exceed the cap on average annual gross receipts specified in the DBE program. Only firms certified at the time of bid/proposal by an agency recognized by DFW are eligible for participation in the SBE program and can be counted towards meeting the goal for purposes of determining contract award. BDDD maintains listings of

certified SBEs by industry codes. These listings are used to notify SBEs of business opportunities and assist vendors to satisfy SBE requirements.

Regardless of certification by a recognized agency, the SBE must be an independent business and cannot be an affiliate of a large business. DFW has the sole discretion to determine eligibility.

Bidders must submit a properly completed SBE certificate or letter at the time of bid/proposal submission, with all required attachments, for all SBEs proposed to be used as subcontractors or suppliers to meet goals. Post award, a contractor is able to count SBEs, certified during the performance of the contract, towards its SBE contractual commitment once documentation concerning such certification is submitted to BDDD. When an SBE participates on a contract, the contractor must count only the value of the work actually performed by the SBE towards the contract-specific goal.

BDDD reviews each eligible bid or proposal to determine whether to set a contract-specific goal using the same criteria as for the other programs. The Airport likewise applies the same GFE, CUF counting and other standards and processes as the M/WBE program.

DFW offers a wide range of technical assistance and business development resources to SBEs, including capital assistance; bonding assistance and support resources; and guidance with general administrative issues, personnel management, invoicing, preparation of business plans, change orders and project budgets.

DFW's SBE program initiatives include:

- SBE Legal Services Initiative to promote growth of SBE certified law firms practicing in aviation-related industries.
- Technical and Business Development Resources offering a wide range of technical assistance and business development resources such as capital and bonding assistance and support resources.
- Subcontractor Mobilization Payments to account with preparatory work necessary to the movement of subcontractor personnel, equipment, supplies and incidentals to the project site.

**e. Experiences with DFW's DBE, M/WBE and SBE Programs**

To explore the impacts of race- and gender-neutral contracting policies and procedures and the implementation of DFW's DBE, M/WBE and SBE programs, we interviewed 154 individuals, including business owners, stakeholder representatives and Airport staff, about their experiences and solicited their suggestions for changes.



*Obtaining Work on Airport Projects:* D/M/WBEs generally reported that the programs work well and that the Airport and BDDD are committed to inclusion and diversity. Ensuring the continuity of program operations and commitment to the programs was mentioned as a concern by some participants. Contract goals were reported to be essential to minority- and women-owned firms' ability to obtain work on DFW contracts and associated subcontracts.

*Access to information:* Participants generally lauded the Small Business Diversity and Development Department. D/M/WBEs felt that they were able to access information through this department.

*Technical Assistance and Supportive Services:* More targeted and detailed help to navigate the Airport's processes and requirements was suggested by many attendees. Access to capital was a major impediment to doing any public work and the size of DFW jobs increases that challenge.

*Contracting processes and requirements:* Airport projects are often very large and complex. This was reported to be a disincentive to small firms to seek DFW contracts. Unbundling projects, providing longer lead times and simplifying requirements would assist these businesses to take on some DFW work. More attention to reducing barriers to small firms was recommended by many interview participants. Insurance requirements were another barrier to the ability of small firms to submit bids or proposals.

*Payments:* Complaints of slow payments came from all types of firms. This seemed to be a universal concern, mostly unrelated to race or gender. This issue is particularly acute for subcontractors at lower tiers of performance (that is, subcontractors to subcontractors). Change orders and delays during contract performance were especially problematic.

*Meeting Contract Goals:* Although not always easy, most prime vendors reported that they have been able to meet DFW's DBE, M/WBE, and SBE goals. Many prime vendors felt that the contract goals were often too high and placed them at uncompensated risk. The good faith efforts process was reported to be so cumbersome and the timing so tight that it is not a realistic option to reduce risk. A representative from a large, national firm offered a different view. Finding qualified certified firms is often challenging for prime contractors and consultants and may cost the prime contractor money. Some prime vendors reported it is difficult to substitute a non-performing certified firm. Some large firms expressed frustration that minority- and women-owned businesses do not aggressively market their services. One solution proposed by several general contractors is to allow multiple certifications to count towards goals on locally-funded contracts. Counting dollars to suppliers at 100 percent on non-FAA funded jobs was

another idea (the DBE program regulations require suppliers to be counted at 60 percent).

**f. Experiences with DFW's ACDBE Program**

Overall, both ACDBEs and prime concessionaires agreed that DFW's ACDBE program has created opportunities for minorities and for women. A few ACDBEs disagreed and believe BDDD does not protect their financial interests. Others reported that they were paid timely. The size of concession packages was a barrier to ACDBE participation as prime concessionaires.

**2. Utilization, Availability and Disparity Analyses<sup>4</sup>**

CHA analyzed contract data for the years 2012 through 2017 for DFW's FAA and non-FAA funded contracts and concession contracts. Strict constitutional scrutiny and the DBE and ACDBE program regulations require that a recipient limit its race-based remedial program to firms doing business in its product and geographic markets. To conduct this analysis, we constructed all the fields necessary for our analysis where they were missing in the Airport's contract records (*e.g.*, industry type; zip codes; NAICS codes of prime contractors and subcontractors; non-Disadvantaged Business Enterprise ("DBE") subcontractor information, including payments, race, gender; etc.). The resulting Final Contract Data File ("FCDF") for analysis contained four subsets: non-FAA funded contracts; FAA funded contracts; non-car rental concessions; and car rental concessions. The *non-FAA funded contracts* subset contained 163 contracts with a net paid amount of \$1,738,946,324; subcontractors received 1,523 contracts. Prime contractors received \$306,558,747 of the net paid amount; subcontractors received \$1,432,387,591 of the net paid amount. The *FAA funded contracts* subset contained five contracts with a net paid amount of \$57,731,839; subcontractors received 41 contracts. Prime contractors received \$31,902,995 of the net paid amount; subcontractors received \$25,828,844. of the net paid amount. The *non-car rental concessions contracts* subset contained 1,054 contracts with a net paid amount of \$2,084,819,161. The *car rental concessions contracts* subset contained 88 contracts with a net paid amount of \$1,517,844,326.

The FCDF was used to determine the geographic and product markets for the analyses, to estimate the utilization of M/WBEs on non-FAA funded contracts; DBEs on FAA funded contracts; and ACDBEs on concession contracts. The FCDF was also used to calculate M/WBE, DBE and ACDBE availability in the Airport's marketplace by funding source and contract type.

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4. Please see Chapter IV.

We analyzed data by funding source, *i.e.*, non-FAA funded contracts; FAA funded contracts; and concessions contracts. This delineation was to assist DFW with meeting its obligations for goal submission under 49 C.F.R. Part 26 and Part 23.

We first determined DFW’s product market for each funding source. The following table presents the NAICS codes, the label for each NAICS code, and the industry percentage distribution of spending across NAICS codes, and by type of contract.

**a. Non-FAA Funded Contracts**

**Table 1-1: Industry Percentage Distribution of Contracts by Dollars Paid for Non-FAA Funded Contracts**

| NAICS        | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|--|----------------------------|---------------------------------------|
| 236220       | Commercial and Institutional Building Construction               | 21.3%                      | 21.3%                                 |
| 238210       | Electrical Contractors and Other Wiring Installation Contractors | 17.3%                      | 38.6%                                 |
| 238120       | Structural Steel and Precast Concrete Contractors                | 10.0%                      | 48.6%                                 |
| 238220       | Plumbing, Heating, and Air-Conditioning Contractors              | 9.9%                       | 58.6%                                 |
| 238310       | Drywall and Insulation Contractors                               | 4.2%                       | 62.8%                                 |
| 562910       | Remediation Services   | 4.0%                       | 66.8%                                 |
| 238910       | Site Preparation Contractors                                     | 3.8%                       | 70.6%                                 |
| 541330       | Engineering Services   | 3.5%                       | 74.1%                                 |
| 488119       | Other Airport Operations   | 2.7%                       | 76.8%                                 |
| 236210       | Industrial Building Construction                                 | 1.5%                       | 78.3%                                 |
| 238130       | Framing Contractors  | 1.4%                       | 79.7%                                 |
| 238150       | Glass and Glazing Contractors                                    | 1.3%                       | 81.0%                                 |
| 237310       | Highway, Street, and Bridge Construction                         | 1.2%                       | 82.2%                                 |
| <b>TOTAL</b> |  |                            | <b>100.0%<sup>a</sup></b>             |

*a. Agency spending across an additional 149 NAICS codes comprised 17.8 percent of all spending. A chart of all of these NAICS codes are in Appendix D.*

*Source: CHA analysis of DFW data.*

To determine the relevant geographic market area for each funding source, we applied the well accepted standard of identifying the firm locations that account for at least 75 percent of contract and subcontract dollar payments in the contract data file.<sup>5</sup> Location was determined by ZIP code and aggregated into counties as the geographic unit.

The State of Texas contained 91.4 percent of the contract dollars in this market. Table 1-2 lists how these dollars were distributed across counties in Texas.

**Table 1-2: Distribution of Contracts in DFW’s Product Market for Non-FAA Funded Contracts across Texas Counties**

| State/County | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|----------------------------|---------------------------------------|
| Dallas       | 61.9%                      | 61.9%                                 |
| Tarrant      | 25.7%                      | 87.6%                                 |
| Denton       | 6.4%                       | 94.0%                                 |
| Collin       | 1.6%                       | 95.5%                                 |
| Johnson      | 0.9%                       | 96.5%                                 |
| Wise         | 0.7%                       | 97.2%                                 |
| Upshur       | 0.4%                       | 97.6%                                 |
| Grayson      | 0.4%                       | 98.1%                                 |
| Harris       | 0.3%                       | 98.4%                                 |
| Ellis        | 0.3%                       | 98.7%                                 |
| Rockwall     | 0.3%                       | 99.0%                                 |
| Bexar        | 0.2%                       | 99.2%                                 |
| Wilson       | 0.2%                       | 99.4%                                 |
| Travis       | 0.2%                       | 99.5%                                 |
| Lubbock      | 0.1%                       | 99.7%                                 |
| Parker       | 0.1%                       | 99.8%                                 |
| Hunt         | 0.1%                       | 99.8%                                 |
| Kaufman      | 0.1%                       | 99.9%                                 |

5. National Academies of Sciences, Engineering, and Medicine 2010, *Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/14346>. (“National Disparity Study Guidelines”), p. 49.

| State/County | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|----------------------------|---------------------------------------|
| Van Zandt    | 0.0%                       | 99.9%                                 |
| Fort Bend    | 0.0%                       | 99.9%                                 |
| Austin       | 0.0%                       | 100.0%                                |
| Henderson    | 0.0%                       | 100.0%                                |
| Gregg        | 0.0%                       | 100.0%                                |
| Navarro      | 0.0%                       | 100.0%                                |
| Montgomery   | 0.0%                       | 100.0%                                |
| Wichita      | 0.0%                       | 100.0%                                |
| <b>TOTAL</b> |                            | <b>100.0%</b>                         |

Source: CHA analysis of DFW data.

Having determined the Airport’s product and geographic market area for non-FAA funded contracts (and, therefore, the agency’s *constrained* product market), the next step was to determine the dollar value of the agency’s utilization of M/WBEs<sup>6</sup> as measured by payments to prime firms and subcontractors and disaggregated by race and gender. DFW did not collect data for all non-M/WBE subcontractors, as well as other records critical for the study. We therefore had to obtain missing data from prime vendors, a lengthy process, as well as reconstruct other contract records, including researching the race and gender ownership of subcontractors and assigning NAICS codes to those firms.

Table 1-3 presents the distribution of contract dollars by all industry sectors. Chapter IV provides detailed breakdowns of these results.

**Table 1-3: Distribution of Non-FAA Funded Contract Dollars by Race and Gender (share of total dollars)**

| NAICS  | Black | Hispanic | Asian | Native American | White Women | M/WBE  | Non-M/WBE | Total  |
|--------|-------|----------|-------|-----------------|-------------|--------|-----------|--------|
| 236210 | 2.6%  | 34.2%    | 0.0%  | 0.0%            | 2.7%        | 39.4%  | 60.6%     | 100.0% |
| 236220 | 2.4%  | 26.4%    | 0.5%  | 0.0%            | 0.1%        | 29.4%  | 70.6%     | 100.0% |
| 237130 | 0.0%  | 78.9%    | 0.0%  | 0.0%            | 21.1%       | 100.0% | 0.0%      | 100.0% |

6. We use the term “M/WBEs” to include firms owned by racial or ethnic minorities and white females that are not certified as M/WBEs by an agency recognized by the Airport. This casts the “broad net” required by the courts, as discussed in Chapter II.

| NAICS        | Black       | Hispanic     | Asian       | Native American | White Women | M/WBE        | Non-M/WBE    | Total         |
|--------------|-------------|--------------|-------------|-----------------|-------------|--------------|--------------|---------------|
| 237310       | 0.0%        | 7.6%         | 0.0%        | 0.0%            | 19.6%       | 27.3%        | 72.7%        | 100.0%        |
| 238120       | 10.4%       | 32.6%        | 0.0%        | 0.8%            | 9.2%        | 53.0%        | 47.0%        | 100.0%        |
| 238130       | 0.6%        | 85.9%        | 3.9%        | 0.0%            | 0.0%        | 90.3%        | 9.7%         | 100.0%        |
| 238150       | 0.0%        | 52.5%        | 0.2%        | 0.0%            | 29.5%       | 82.1%        | 17.9%        | 100.0%        |
| 238210       | 3.2%        | 26.2%        | 0.0%        | 0.8%            | 9.5%        | 39.8%        | 60.2%        | 100.0%        |
| 238220       | 2.4%        | 4.1%         | 4.0%        | 2.0%            | 18.9%       | 31.4%        | 68.6%        | 100.0%        |
| 238290       | 0.0%        | 62.7%        | 0.0%        | 0.0%            | 7.0%        | 69.7%        | 30.3%        | 100.0%        |
| 238310       | 0.0%        | 2.7%         | 8.7%        | 0.0%            | 6.5%        | 17.9%        | 82.1%        | 100.0%        |
| 238910       | 17.0%       | 29.5%        | 1.7%        | 0.0%            | 17.1%       | 65.3%        | 34.7%        | 100.0%        |
| 334220       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 1.6%        | 1.6%         | 98.4%        | 100.0%        |
| 488119       | 5.0%        | 0.0%         | 0.0%        | 0.0%            | 1.2%        | 6.2%         | 93.8%        | 100.0%        |
| 518210       | 0.0%        | 0.3%         | 0.0%        | 0.0%            | 99.7%       | 100.0%       | 0.0%         | 100.0%        |
| 541330       | 19.1%       | 4.6%         | 6.8%        | 0.0%            | 4.3%        | 34.8%        | 65.2%        | 100.0%        |
| 541512       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 4.7%        | 4.7%         | 95.3%        | 100.0%        |
| 561320       | 2.1%        | 33.0%        | 12.3%       | 0.0%            | 52.3%       | 99.7%        | 0.3%         | 100.0%        |
| 562910       | 0.0%        | 21.2%        | 0.0%        | 5.6%            | 6.3%        | 33.1%        | 66.9%        | 100.0%        |
| 812930       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 0.0%        | 0.0%         | 100.0%       | 100.0%        |
| Total        | 4.5%        | 23.0%        | 1.5%        | 0.8%            | 8.9%        | 38.8%        | 61.2%        | 100.0%        |
| <b>Total</b> | <b>4.5%</b> | <b>23.0%</b> | <b>1.5%</b> | <b>0.8%</b>     | <b>8.9%</b> | <b>38.8%</b> | <b>61.2%</b> | <b>100.0%</b> |

Source: CHA analysis of DFW data.

Using the “custom census” approach to estimating availability and the further assignment of race and gender using the FCDF, Master Directory and other sources, we determined the aggregated availability of M/WBEs, weighted<sup>7</sup> by DFW’s spending in its geographic and industry markets, to be 31 percent for non-FAA funded contracts. Table 1-4 presents the weighted

7. For purposes of goal setting, the availability estimates should be weighted by the agency’s actual spending patterns, as determined by the NAICS codes it utilized. Weighting availability results is a more accurate picture of what firms are available to participate in the agency’s opportunities. For example, high availability in a code in which minimal dollars are spent would give the impression that there are more D/M/WBEs that can perform work on agency contracts than are actually ready, willing and able. Conversely, a low availability in a high dollar scope would understate the potential dollars that could be spent with D/M/WBEs. This is why the USDOT “Tips for Goal Setting” urge recipients to weight their headcount of firms by dollars spent. See <https://www.transportation.gov/osdbu/disadvantaged-business-enterprise/tips-goal-setting-disadvantaged-business-enterprise>.

availability data for all product sectors combined for the racial and gender categories.

**Table 1-4: Aggregated Weighted Availability for Non-FAA Funded Contracts**

| Black | Hispanic | Asian | Native American | White Women | M/WBE | Non-M/WBE | Total  |
|-------|----------|-------|-----------------|-------------|-------|-----------|--------|
| 8.0%  | 9.3%     | 3.0%  | 1.1%            | 9.6%        | 31.0% | 69.0%     | 100.0% |

Source: CHA analysis of DFW data; Hoovers; CHA Master Directory.

To meet the strict scrutiny test that requires that all groups must have suffered discrimination in DFW’s markets to be eligible for credit towards meeting M/WBE contract goals, we next calculated disparity ratios comparing the Airport’s utilization of M/WBEs as prime contractors and subcontractors to the availability of these firms in its market areas. Table 1-5 presents these results for non-FAA funded contracts.

**Table 1-5: Disparity Ratios by Demographic Group  
Non-FAA Funded Contracts**

|                 | Black              | Hispanic | Asian              | Native American    | White Women | M/WBE    | Non-M/WBE |
|-----------------|--------------------|----------|--------------------|--------------------|-------------|----------|-----------|
| Disparity Ratio | 56.9% <sup>‡</sup> | 248.5%   | 50.8% <sup>‡</sup> | 70.8% <sup>‡</sup> | 91.9%       | 124.9%** | 88.8%     |

Source: CHA analysis of DFW data.

<sup>‡</sup> Indicates substantive significance

\*\*Indicates statistical significance at the 0.01 level<sup>8</sup>

We performed similar analyses for FAA funded contracts; car rental concession contracts; and non-car rental concessions contracts, as detailed in the tables below.

8. Appendix C discusses the meaning and role of statistical significance.

**b. FAA Funded Contracts**

**Table 1-6: Industry Percentage Distribution of Contracts by Dollars Paid for  
FAA Funded Contracts, All Contracts**

| <b>NAICS</b> | <b>NAICS Code Description</b>                                    | <b>Pct Total Contract Dollars</b> | <b>Cumulative Pct Total Contract Dollars</b> |
|--------------|--|-----------------------------------|--|
| 236220       | Commercial and Institutional Building Construction               | 54.6%                             | 54.6%  |
| 541330       | Engineering Services   | 16.1%                             | 70.7%  |
| 238210       | Electrical Contractors and Other Wiring Installation Contractors | 8.7%                              | 79.4%  |
| 238220       | Plumbing, Heating, and Air-Conditioning Contractors              | 4.9%                              | 84.3%  |
| 335312       | Motor and Generator Manufacturing                                | 2.4%                              | 86.7%  |
| 212312       | Crushed and Broken Limestone Mining and Quarrying                | 2.2%                              | 88.9%  |
| 238120       | Structural Steel and Precast Concrete Contractors                | 1.5%                              | 90.4%  |
| 811412       | Appliance Repair and Maintenance                                 | 1.5%                              | 91.9%  |
| 327320       | Ready-Mix Concrete Manufacturing                                 | 1.3%                              | 93.2%  |
| 484220       | Specialized Freight (except Used Goods) Trucking, Local          | 1.0%                              | 94.2%  |
| 488119       | Other Airport Operations   | 0.9%                              | 95.1%  |
| 331110       | Iron and Steel Mills and Ferroalloy Manufacturing                | 0.9%                              | 95.9%  |
| 236210       | Industrial Building Construction                                 | 0.9%                              | 96.8%  |
| 238910       | Site Preparation Contractors                                     | 0.7%                              | 97.5%  |
| 332613       | Spring Manufacturing   | 0.6%                              | 98.1%  |
| 237310       | Highway, Street, and Bridge Construction                         | 0.6%                              | 98.7%  |
| 237990       | Other Heavy and Civil Engineering Construction                   | 0.4%                              | 99.1%  |
| 238990       | All Other Specialty Trade Contractors                            | 0.4%                              | 99.5%  |
| 541380       | Testing Laboratories   | 0.4%                              | 99.9%  |
| 324121       | Asphalt Paving Mixture and Block Manufacturing                   | 0.0%                              | 100.0%                                       |
| 561730       | Landscaping Services   | 0.0%                              | 100.0%                                       |
| <b>TOTAL</b> |  |                                   | <b>100.0%</b>                                |

Source: CHA analysis of DFW data.



**Table 1-7: Distribution of Contracts in DFW’s Product Market for FAA Funded Contracts**

| State/County | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|----------------------------|---------------------------------------|
| Dallas       | 61.6%                      | 61.6%                                 |
| Denton       | 29.1%                      | 90.7%                                 |
| Tarrant      | 7.6%                       | 98.3%                                 |
| Collin       | 0.9%                       | 99.2%                                 |
| Williamson   | 0.7%                       | 99.8%                                 |
| Johnson      | 0.1%                       | 99.9%                                 |
| Rockwall     | 0.0%                       | 100.0%                                |
| Harris       | 0.0%                       | 100.0%                                |
| <b>TOTAL</b> |                            | <b>100.0%</b>                         |

Source: CHA analysis of DFW data.

**Table 1-8: Distribution of FAA Funded Contract Dollars by Race and Gender (share of total dollars)**

| NAICS  | Black  | Hispanic | Asian | Native American | White Women | DBE    | Non-DBE | Total  |
|--------|--------|----------|-------|-----------------|-------------|--------|---------|--------|
| 212312 | 0.0%   | 0.0%     | 0.0%  | 0.0%            | 0.0%        | 0.0%   | 100.0%  | 100.0% |
| 236220 | 0.0%   | 27.3%    | 0.0%  | 0.0%            | 0.0%        | 27.3%  | 72.7%   | 100.0% |
| 237310 | 0.0%   | 0.0%     | 0.0%  | 0.0%            | 48.4%       | 48.4%  | 51.6%   | 100.0% |
| 238120 | 0.0%   | 0.0%     | 0.0%  | 0.0%            | 67.8%       | 67.8%  | 32.3%   | 100.0% |
| 238210 | 85.1%  | 9.9%     | 0.0%  | 0.0%            | 0.0%        | 95.0%  | 5.0%    | 100.0% |
| 238220 | 0.0%   | 92.1%    | 0.0%  | 0.0%            | 7.9%        | 100.0% | 0.0%    | 100.0% |
| 238910 | 0.0%   | 0.0%     | 0.0%  | 0.0%            | 0.0%        | 0.0%   | 100.0%  | 100.0% |
| 238990 | 0.0%   | 0.0%     | 0.0%  | 0.0%            | 100.0%      | 100.0% | 0.0%    | 100.0% |
| 324121 | 100.0% | 0.0%     | 0.0%  | 0.0%            | 0.0%        | 100.0% | 0.0%    | 100.0% |
| 327320 | 0.0%   | 0.0%     | 0.0%  | 0.0%            | 100.0%      | 100.0% | 0.0%    | 100.0% |
| 484220 | 0.0%   | 100.0%   | 0.0%  | 0.0%            | 0.0%        | 100.0% | 0.0%    | 100.0% |
| 488119 | 0.0%   | 0.0%     | 0.0%  | 0.0%            | 100.0%      | 100.0% | 0.0%    | 100.0% |
| 541330 | 0.0%   | 3.2%     | 0.0%  | 0.0%            | 0.0%        | 3.2%   | 96.8%   | 100.0% |

| NAICS        | Black       | Hispanic     | Asian       | Native American | White Women | DBE          | Non-DBE      | Total         |
|--------------|-------------|--------------|-------------|-----------------|-------------|--------------|--------------|---------------|
| 541380       | 100.0%      | 0.0%         | 0.0%        | 0.0%            | 0.0%        | 100.0%       | 0.0%         | 100.0%        |
| 811412       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 100.0%      | 100.0%       | 0.0%         | 100.0%        |
| <b>Total</b> | <b>8.3%</b> | <b>22.5%</b> | <b>0.0%</b> | <b>0.0%</b>     | <b>6.0%</b> | <b>36.9%</b> | <b>63.1%</b> | <b>100.0%</b> |

Source: CHA analysis of DFW data.

**Table 1-9: Aggregated Weighted Availability for FAA Funded Contracts<sup>9</sup>**

| Black | Hispanic | Asian | Native American | White Women | DBE   | Non-DBE | Total  |
|-------|----------|-------|-----------------|-------------|-------|---------|--------|
| 9.6%  | 8.4%     | 2.7%  | 1.8%            | 9.6%        | 32.2% | 67.8%   | 100.0% |

Source: CHA analysis of DFW data; Hoovers; CHA Master Directory.

**c. Non-Car Rental Concession Contracts**

We performed a similar analysis for non-car rental concession contracts. Table 1-10 presents the dollar value of these contracts.

**Table 1-10: Industry Percentage Distribution of Contracts by Dollars Paid for Non-Car Rental Concession Contracts**

| NAICS  | NAICS Code Description               | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|--------------------------------------|----------------------------|---------------------------------------|
| 722310 | Food Service Contractors             | 54.3%                      | 54.3%                                 |
| 451212 | News Dealers and Newsstands          | 9.9%                       | 64.2%                                 |
| 523130 | Commodity Contracts Dealing          | 7.5%                       | 71.8%                                 |
| 453220 | Gift, Novelty, and Souvenir Stores   | 7.2%                       | 78.9%                                 |
| 445310 | Beer, Wine, and Liquor Stores        | 4.4%                       | 83.3%                                 |
| 445120 | Convenience Stores                   | 2.4%                       | 85.7%                                 |
| 443142 | Electronics Stores                   | 2.2%                       | 87.9%                                 |
| 722213 | Snack and Nonalcoholic Beverage Bars | 1.4%                       | 89.3%                                 |

9. M/WBE availability consists of minority- and women-owned firms. The Airport’s SBE program does include small white male-owned firms; these firms are included in the non-M/WBE category.

| NAICS        | NAICS Code Description       | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|------------------------------|----------------------------|---------------------------------------|
| 722110       | Full-Service Restaurants     | 1.1%                       | 90.4%                                 |
| 445292       | Confectionery and Nut Stores | 1.1%                       | 91.5%                                 |
| <b>TOTAL</b> |                              |                            | <b>100.0%<sup>a</sup></b>             |

a. Agency spending across an additional 32 NAICS codes comprised 8.5 percent of all spending. A chart of all of these NAICS codes are in Appendix D.

Source: CHA analysis of DFW data.

The State of Texas contained 87.3 percent of all contract dollars. Of these dollars, the counties listed in Table 1-11 contained 96.2 percent of the in-state dollars. These 6 Texas counties constituted the geographic market.

**Table 1-11: Distribution of Contracts in DFW’s Product Market for Non-Car Rental Concession Contracts by County**

| County       | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|----------------------------|---------------------------------------|
| Dallas       | 39.6%                      | 39.6%                                 |
| Tarrant      | 36.4%                      | 76.0%                                 |
| Harris       | 8.6%                       | 84.6%                                 |
| Midland      | 5.4%                       | 90.1%                                 |
| Denton       | 3.1%                       | 93.2%                                 |
| Collin       | 3.0%                       | 96.2%                                 |
| <b>TOTAL</b> |                            | <b>100.0%<sup>a</sup></b>             |

a. Three other counties contained just 3.8 percent of the state spending.

Source: CHA analysis of DFW data.

Table 1-12 represents the results of our analysis of the Airport’s utilization by contract dollars for Non-Car Rental Concessions.

**Table 1-12: Distribution of Non-Car Rental Concessions Contract Dollars by Race and Gender  
(share of total dollars)**

| NAICS        | Black        | Hispanic     | Asian       | Native American | White Women | ACDBE        | Non-ACDBE    | Total         |
|--------------|--------------|--------------|-------------|-----------------|-------------|--------------|--------------|---------------|
| 445120       | 42.7%        | 12.5%        | 0.0%        | 0.0%            | 0.0%        | 55.2%        | 44.8%        | 100.0%        |
| 445292       | 1.5%         | 86.9%        | 0.0%        | 0.0%            | 0.0%        | 88.5%        | 11.6%        | 100.0%        |
| 445310       | 4.3%         | 6.1%         | 0.0%        | 0.0%            | 0.0%        | 10.4%        | 89.6%        | 100.0%        |
| 451212       | 20.1%        | 30.7%        | 3.2%        | 0.0%            | 0.0%        | 53.9%        | 46.1%        | 100.0%        |
| 453220       | 20.0%        | 18.6%        | 1.3%        | 0.0%            | 0.0%        | 39.9%        | 60.2%        | 100.0%        |
| 523130       | 0.0%         | 40.3%        | 0.0%        | 0.0%            | 0.0%        | 40.3%        | 59.7%        | 100.0%        |
| 722110       | 27.8%        | 37.5%        | 0.0%        | 0.0%            | 2.8%        | 68.1%        | 31.9%        | 100.0%        |
| <b>Total</b> | <b>22.9%</b> | <b>34.7%</b> | <b>0.5%</b> | <b>0.0%</b>     | <b>1.8%</b> | <b>59.9%</b> | <b>40.1%</b> | <b>100.0%</b> |

Source: CHA analysis of DFW data.

We built a database of available firms in the car rental concessions market. Table 1-13 presents data on the weighted availability.

**Table 1-13: Aggregated ACDBE Weighted Availability for Non-Car Rental Concession Contracts  
(total dollars)**

| Black | Hispanic | Asian | Native American | White Women | ACDBE | Non-ACDBE | Total  |
|-------|----------|-------|-----------------|-------------|-------|-----------|--------|
| 4.8%  | 6.5%     | 2.8%  | 0.1%            | 3.8%        | 18.0% | 82.0%     | 100.0% |

Source: CHA analysis of DFW data; Hoovers; CHA Master Directory.

We did not perform disparity testing on concession contracts because it is not required under 49 C.F.R. Part 23.

**d. Car Rental Concession Contracts**

Two NAICS codes (New Car Dealers – 441110; Passenger Car Rental- 532111) captured 99.4 percent of all of the Airport’s spending on car rental concessions. These two NAICS codes represent the unconstrained product market and Table 1-14 presents these data.

**Table 1-14: Industry Percentage Distribution of Contracts by Dollars Paid for Car Rental Concession Contracts**

| NAICS        | NAICS Code Description | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|------------------------|----------------------------|---------------------------------------|
| 532111       | Passenger Car Rental   | 86.5%                      | 86.5%                                 |
| 441110       | New Car Dealers        | 12.9%                      | 99.4%                                 |
| <b>TOTAL</b> |                        |                            | <b>100.0%</b>                         |

Source: CHA analysis of DFW data.

Tarrant County (TX) and Los Angeles County (CA) capture 96.5 percent of unconstrained product market and will define the geographic market for this study. Table 1-15 presents this data.

**Table 1-15: Distribution of Contracts in DFW’s Product Market for Car Rental Concession Contracts by State**

| County      | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|-------------|----------------------------|---------------------------------------|
| Tarrant     | 85.8%                      | 85.8%                                 |
| Los Angeles | 10.7%                      | 96.5%                                 |

Source: CHA analysis of DFW data.

Table 1-16 presents the Airport’s utilization (after the data represented in Table 1-15 has been limited to just the two counties in the Airport’s geographic market) for car rental concessions by contract dollars.

**Table 1-16: Distribution of Car Rental Concession Contract Dollars by Race and Gender (share of total dollars)**

| NAICS        | NAICS Code Description | Total Contract Dollars    | Pct Total Contract Dollars |
|--------------|------------------------|---------------------------|----------------------------|
| 532111       | Passenger Car Rental   | \$1,295,494,228.06        | 88.9%                      |
| 441110       | New Car Dealers        | \$161,089,526.88          | 11.1%                      |
| <b>TOTAL</b> |                        | <b>\$1,456,583,754.94</b> | <b>100.0%</b>              |

Source: CHA analysis of DFW data

**Table 1-17: Distribution of Car Rental Concession Contract Dollars by Race and Gender  
(share of total dollars)**

| NAICS        | Black       | Hispanic     | Asian       | Native American | White Women | ACDBE        | Non-ACDBE    | Total         |
|--------------|-------------|--------------|-------------|-----------------|-------------|--------------|--------------|---------------|
| 441110       | 0.0%        | 100.0%       | 0.0%        | 0.0%            | 0.0%        | 100.0%       | 0.0%         | 100.0%        |
| 532111       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 0.0%        | 0.0%         | 100.0%       | 100.0%        |
| <b>Total</b> | <b>0.0%</b> | <b>11.1%</b> | <b>0.0%</b> | <b>0.0%</b>     | <b>0.0%</b> | <b>11.1%</b> | <b>88.9%</b> | <b>100.0%</b> |

Source: CHA analysis of DFW data

Table 1-18 summarizes the weighted ACDBE availability to perform on car rental concession contracts.

**Table 1-18: Aggregated Weighted Availability for Car Rental Concession Contracts  
(total dollars)**

| Black | Hispanic | Asian | Native American | White Women | ACDBE | Non-ACDBE | Total  |
|-------|----------|-------|-----------------|-------------|-------|-----------|--------|
| 0.5%  | 0.3%     | 0.2%  | 0.0%            | 2.2%        | 3.1%  | 96.9%     | 100.0% |

Source: CHA analysis of DFW data; Hoovers; CHA Master Directory.

### 3. Analysis of Economy-Wide Race and Gender Disparities in the Airport’s Market<sup>10</sup>

We explored the Census Bureau data and literature relevant to how discrimination in the Airport’s industry market and throughout the wider economy affects the ability of minorities and women to fairly and fully engage in DFW’s prime contract and subcontract opportunities.

We analyzed the following data and literature:

- Data from the Census Bureau’s *Survey of Business Owners* indicate very large disparities between M/WBE firms and non-M/WBE firms when examining the sales of all firms, the sales of employer firms (firms that employ at least one worker), or the payroll of employer firms.
- Data from the Census Bureau’s *American Community Survey* (“ACS”) indicate that Blacks, Hispanics and White women were underutilized relative to White men. Controlling for other factors relevant to business

10. Please see Chapter V.

outcomes, wages and business earnings were lower for these groups compared to White men. Data from the ACS further indicate that non-Whites and White women are less likely to form businesses compared to similarly situated White men.

- The literature on barriers to access to commercial credit and the development of human capital further reports that minorities continue to face constraints on their entrepreneurial success based on race. These constraints negatively impact the ability of firms to form, to grow, and to succeed.

All three types of evidence have been found by the courts to be relevant and probative of whether a government will be a passive participant in overall marketplace discrimination without some type of affirmative intervention. Taken together with anecdotal data, this is the type of proof that addresses whether, in the absence of DBE contract goals, DFW will be a passive participant in the discriminatory systems found throughout its industry market. These economy-wide analyses are relevant and probative to whether the agency may continue to employ narrowly tailored race- and gender-conscious measures to ensure equal opportunities to access its contracts and associated subcontracts.

#### **4. Qualitative Evidence of Race and Gender Barriers in the Dallas Fort Worth Overall Market<sup>11</sup>**

In addition to quantitative data, the courts and the DBE and ACDBE regulations look to anecdotal evidence of firms' marketplace experiences to evaluate whether the effects of current or past discrimination continue to impede opportunities for MBEs, WBEs, DBEs and ACDBEs such that race-conscious measures are necessary to ensure a level playing field for all firms.

To explore this type of anecdotal evidence, we interviewed 154 participants. Many minority and women owners reported that while some progress has been made in integrating their firms into public and private sector transportation contracting activities through race- and gender-conscious contracting programs, significant barriers remain. Race- and gender-neutral approaches alone were described as unlikely to ensure a level playing field for DFW contract and concession opportunities.

We also conducted an electronic survey of firms in DFW's market area about their experiences in obtaining work, marketplace conditions and the agency's contracting equity programs. The results were similar to those of the interviews. Almost 40 percent reported they still experience barriers to equal contracting opportunities; almost a quarter said their competency was questioned

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because of their race or gender; and almost 30 percent indicated less access to business networks and information.

## **D. Recommendations<sup>12</sup>**

Based upon these findings, input of agency staff, and national best practices for business diversity programs, we were asked to make recommendations for enhanced remedies to ensure a level playing field for all Airport opportunities. The quantitative and qualitative data in this Study provide a thorough examination of the evidence of the experiences of DBEs, ACDBEs and M/WBEs in DFW's geographic and industry markets. As required by strict constitutional scrutiny, we determined the Airport's utilization of DBEs, ACDBEs, and M/WBEs; the availability of these firm's as a percentage of all firms in DFW's geographic and industry market areas; and any disparities between DFW's utilization of M/WBE on its locally-funded contracts and M/WBE availability. We further analyzed disparities in the wider economy, where affirmative action is rarely practiced, to evaluate whether barriers continue to impede opportunities for minorities and women when remedial intervention is not imposed. We also solicited anecdotal or qualitative evidence from minority and women firms in obtaining DFW contracts and associated contracts and concession opportunities.

### **1. Augment Race- and Gender-Neutral Measures**

Courts have found that implementing race- and gender-neutral methods to reduce barriers on the basis of race or gender in contracting are a critical element of making sure that race- and gender-conscious programs are narrowly tailored. DFW's race- and gender-neutral measures should be augmented to ensure that the burden on non-M/W/DBEs is no more than necessary to achieve the Airport's remedial purposes. Increased participation through race-neutral measures by M/W/DBEs on all contracts regardless of funding source and ACDBEs on concession opportunities will also reduce the need to set contract goals.

*Ensure Prompt Payment of Prime Vendors and Subcontractors:* Pay prime contractors for the work that the subcontractor has satisfactorily performed, even if all the other subs and/or the prime contractor cannot yet invoice for their work or DFW has not yet approved payment for those line items. This removes the risk from the subcontractors of issues unrelated to their performance or factors outside their control and eliminates delays that could result in extreme financial distress for small firms. This will, however, require a system that per-

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12. Please see Chapter VII.



mits prime contractors to submit partial invoices, which will be some additional burden on the Airport and prime vendors.

*Increase Contract “Unbundling”:* Unbundle projects to provide longer lead times and simplify requirements to assist smaller businesses to take on Airport work. In conjunction with reduced insurance and bonding requirements where possible, unbundled contracts should permit smaller firms to move from quoting solely as subcontractors to bidding as prime contractors, as well as enhance their subcontracting opportunities. On call contracts were one vehicle mentioned as a way to involve smaller firms. Unbundling must be conducted, however, within the constraints of the need to ensure efficiency and limit costs to taxpayers.

*Review Contracting Requirements:* Undertake an overall review of contracting policies with an eye towards reducing complexities and simplifying procedures. Many business owners and stakeholders, M/W/DBEs and non-M/W/DBEs alike, agreed that the Airport’s contracting processes were burdensome and cumbersome and act as disincentives for smaller firms to work as prime vendors or subcontractors.

*Provide Additional Training to Prime Bidders on Program Compliance:* Provide targeted training on the requirements for all aspects of compliance, including the standards for submitting and approving submissions that do not meet the contract goal and reporting utilization of certified firms, so that bidders understand that the programs are in fact flexible. This would address the misperception among prime vendors that the programs’ goals are rigid requirements, and that their submission of good faith efforts documentation would not be accepted.

*Ensure Bidder Non-Discrimination and Fairly Priced Subcontractor Quotations:* Require bidders to maintain all subcontractor quotes received on specified projects and treat compliance as an element of maintaining prequalification or of being deemed a responsible bidder. This would help in investigating claims made by some M/W/DBEs that prime contractors may not be soliciting subcontractor quotes in good faith on DFW projects or fail to solicit at all on non-goals projects. It will also help in investigating concerns among prime contractors that using certified firms increases their costs and risks, and that M/W/DBEs sometimes inflate bids because they assume they must be utilized.

*Develop a Bonding and Financing Program for M/W/D/SBEs:* Develop an Airport-sponsored bonding and financing assistance program for certified firms. This approach goes beyond the provision of information about outside bonding and financing resources to providing actual assistance to firms through a program consultant. It is not, however, a bonding guarantee program that places the Airport’s credit at risk or provides direct subsidies to participants. Rather, this concept brings the commitment of a surety to provide a bond for

firms that have successfully completed the training and mentoring program. Other agencies have reported significant increases in certified firms' bonding capacities and ability to take on larger projects.

## **2. Continue to Implement Narrowly Tailored DBE and ACDBE Programs**

*Use the Study to Set the Triennial DBE Goal and Contract Goals:* Use the DBE weighted availability findings for FAA funded contracts to determine the Step 1 base figure for the relative availability of DBEs required by § 26.45(c). Our custom census is an alternative method permitted under §26.45(c)(5) and is the only approach that has received repeated judicial approval.

To perform the Step 2 analysis required by § 26.45(d) to adjust the Step 1 figure to reflect the level of DBE availability that would be expected in the absence of discrimination, DFW can use the statistical disparities in Chapter V, which reflect the rates at which DBEs form businesses in DFW's markets. This is the type of "demonstrable evidence that is logically and directly related to the effect for which the adjustment is sought."<sup>13</sup>

To set narrowly tailored contract goals that reflect the percentage of available DBEs as a percentage of the total pool of available firms, DFW should use the highly detailed unweighted estimates in Chapter IV as a starting point. The Airport should weigh the estimated scopes of the contract by the availability of DBEs in those scopes, and then adjust the result based on geography and current market conditions (for example, the volume of work currently underway in the market, the entrance of newly certified firms, specialized nature of the project, etc.).

The B2Gnow electronic data collection and monitoring system contains a contract goal setting module developed to utilize the study's unweighted availability data as a starting basis. Written procedures based on the study results detailing the implementation of contract goal setting should be developed and disseminated so that all contracting actors understand the methodology.

*Use the Study to Set the ACDBE Triennial and Contract Goals:* Use the study's weighted availability estimates as the Step 1 basis for the car rental ACDBE goal and the non-car rental ACDBE goal. DFW can use the statistical disparities in Chapter V for the Step 2 analysis. The detailed unweighted availability data should be used as the starting point for contract goal setting.

*Permit All Forms of ACDBE Utilization:* We recommend that the Airport encourage all forms of contractual relationships, not only joint ventures. The

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13. 49 CFR § 26.45(d)(3); see also §23.51.

policy, implemented under a prior administration, that only counts ACDBE utilization towards ACDBE contract goals for joint venture relationships has resulted in constrained opportunities for ACDBEs, as they are not afforded the opportunity to manage and control their own locations. This will require that DFW educate concessionaires to ensure that proposers understand that the use of subtenant leases and purchasing goods from certified suppliers will fully count towards meeting the goals.

*Permit individual determinations of social disadvantage:* To ensure that all forms of discrimination are addressed, the Airport should revise its policy and adopt the standards of Appendix E to 49 C.F.R. Part 26 governing determinations of social disadvantage on an individual basis for firms owned by person not member of the presumptively disadvantaged groups. This will permit firms owned by persons with disabilities, military veterans, Arab Americans, gay White males, transgender individuals, and others to be certified where they met the criteria established in the regulation.

### **3. Revise the M/WBE Program**

*Continue Race- and Gender-Conscious Contract Goals on Locally-funded Contracts:* The current SBE Program was created in response to the 2010 Availability and Disparity Study. Because that study did not provide a strong basis in evidence for setting race- and gender-conscious contract goals, the Airport adopted the SBE program. This Study's results support the determination that DFW has a strong basis in evidence to implement a fully race-and gender-conscious program that includes all groups for race-conscious relief for its locally-funded contracts.

While all groups did not experience large disparities in their utilization on locally-funded contracts, the overall picture from the quantitative and qualitative data is that of continuing barriers on the basis of race and gender and a playing field that is not yet equal for all firms. The experiences of M/W/DBEs outside of contracting affirmative action programs strongly suggests that it is the use of flexible contract goals on DFW projects that has led to these results. Utilization is the result of DFW's strong administration of the M/WBE program, not the absence of discrimination on the basis of race and gender in the Airport's market area. Without the use of contract goals to level the playing field, DFW might function as a "passive participant" in the "market failure" of discrimination.

*Use the Study to Set the M/WBE Annual and Contract Goals:* As with the DBE and ACDBE programs, the weighted availability estimate in Chapter IV should be the basis for DFW's overall annual, aspirational goal for its non-FAA funded contracts. Similar to the contract goal setting methodology for DBE and

ACDBE goals, the unweighted estimates can serve as the basis for goal setting using the B2Gnow electronic data collection and monitoring system.

*Include All Racial and Ethnic Minority Groups and White Women in the Program:* Our new research establishes that sexism continues to impede the opportunities for White females, and they do not enjoy a level playing field with non-WBEs and large firms. While the overall disparity ratio is greater than 80 percent for this group, the economy-wide and anecdotal evidence establishes that market intervention is warranted. This is also true for Hispanic firms which despite the small concentration of firms receiving large percentages of contract dollars in three NAICS codes, received few contracts outside of these codes.

*Include Personal Net Worth and Firm Size Requirements:* DFW does not impose a personal net worth or size restriction in its local program. It should consider adopting such tests (which have been important to the courts' unanimous rulings that the USDOT DBE program is constitutional) for its local program.

*Limit Program Eligibility to Firms Located in the Study's Market Area:* We recommend DFW limit eligibility to firms with a physical place of business in the market area established by the study: Dallas, Tarrant, Denton, and Collin Counties as discussed in Chapter II, a local program must limit its reach to its geographic market area. Firms located outside this area could establish their eligibility by demonstrating that they have attempted to do business in this area through efforts such as submitting bids/proposals, attending marketing events, or other indicia of their desire to do business in the Airport's market area.

*Adopt a Pilot Mentor-Protégé Program:* DFW should consider adopting a pilot Mentor-Protégé Program ("MPP") for M/WBEs. We suggest starting with construction firms, as that is the industry in which these programs have been mostly implemented and for which there are successful examples. An excellent national model is provided in the DBE program regulations at 49 C.F.R. § 26.35 and the Guidelines of Appendix D to Part 26. In addition to the standards provided in Part 26, the General Counsel's Office at the USDOT has provided some additional guidance, and the USDOT's Office of Small Disadvantaged Business Utilization has adopted a pilot program and has drafted sample documents. Elements reflecting best practices for this program should be followed and can be found in Chapter VII Recommendations.

*Develop Performance Measures for Program Success:* DFW should develop quantitative performance measures for certified firms and the overall success of the program to evaluate its effectiveness in reducing the systemic barriers identified by the study. In addition to meeting the annual goal(s), possible benchmarks might include, the number of bids or proposals and the dollar amount of the awards, the goal shortfall where the bidder submitted good

faith efforts to meet the contract goal; the number and dollar amount of bids or proposals rejected as non-responsive for failure to make good faith efforts to meet the goal; the number, type, and dollar amount of M/WBE substitutions during contract performance; increased bidding by certified firms; increased prime contract awards to certified firms; and increased “capacity” of certified firms as measured by bonding limits such as size of jobs or profitability.



## II. LEGAL STANDARDS FOR DALLAS FORT WORTH INTERNATIONAL AIRPORT'S BUSINESS DIVERSITY PROGRAMS

### A. Summary of Constitutional Equal Protection Standards

To be effective, enforceable, and legally defensible, a race-based program for public sector contracts, regardless of funding source, must meet the judicial test of constitutional “strict scrutiny”. Strict scrutiny is the highest level of judicial review. Strict scrutiny analysis is comprised of two prongs:

1. The government must establish its “compelling interest” in remediating race discrimination by current “strong evidence” of the persistence of discrimination. Such evidence may consist of the entity’s “passive participation” in a system of racial exclusion.
2. Any remedies adopted must be “narrowly tailored” to that discrimination; the program must be directed at the types and the depth of discrimination identified.<sup>14</sup>

The compelling governmental interest prong has been met through two types of proof:

1. Statistical evidence of the underutilization of minority or women firms by the agency and/or throughout the agency’s geographic and industry market area compared to their availability in the market area. These are disparity indices, comparable to the type of “disparate impact” analysis used in employment discrimination cases.
2. Anecdotal evidence of race- or gender-based barriers to the full and fair participation of minority and women firms in the market area and seeking contracts with the agency, comparable to the “disparate treatment” analysis used in employment discrimination cases.<sup>15</sup> Anecdotal data can consist of

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14. *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).

15. *Id.* at 509.

interviews, surveys, public hearings, academic literature, judicial decisions, legislative reports, and other information.

The narrow tailoring prong has been met by satisfying five factors to ensure that the remedy “fits” the evidence:

1. The necessity of relief;
2. The efficacy of race-neutral remedies at overcoming identified discrimination;
3. The flexibility and duration of the relief, including the availability of waiver provisions;
4. The relationship of numerical goals to the relevant market; and
5. The impact of the relief on the rights of third parties.

In *Adarand v. Peña*,<sup>16</sup> the United States Supreme Court extended the analysis of strict scrutiny to race-based federal enactments such as the United States Department of Transportation (“USDOT”) Disadvantaged Business Enterprise (“DBE”) program for federally-assisted transportation contracts (which applies to the Dallas Fort Worth International Airport’s (“DFW” or “Airport”) Federal Aviation Administration (“FAA”)-assisted prime contracts and related subcontracts and airport concession contracts).<sup>17</sup> Just as in the local government context, the national legislature must have a compelling governmental interest for the use of race, and the remedies adopted must be narrowly tailored to that evidence.<sup>18</sup>

Most federal courts, including the Fifth Circuit,<sup>19</sup> have subjected preferences for Women-Owned Business Enterprises (“WBEs”) to “intermediate scrutiny”. Gender-based classifications must be supported by an “exceedingly persuasive justification” and be “substantially related to the objective”.<sup>20</sup> However, appellate courts have applied strict scrutiny to the gender-based presumption of social disadvantage in reviewing the constitutionality of the DBE program<sup>21</sup> or held that the results would be the same under strict scrutiny.<sup>22</sup>

Classifications not based upon a suspect class (race, ethnicity, religion, national origin or gender) are subject to the lesser standard of review called “rational basis”

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16. *Adarand v. Peña*, 515 U.S. 200 (“*Adarand III*”) (1995).

17. 49 C.F.R. Part 26 and Part 23.

18. *See, for example, Croson*, 488 U.S. at 492-493; *Adarand III*, 515 U.S. 200, 227; *see generally Fisher v. University of Texas*, 133 S. Ct. 2411 (2013).

19. *W.H. Scott Construction Co., Inc., v. City of Jackson, Mississippi*, 199 F.3d 206, 215 n.9 (5<sup>th</sup> Cir. 1999).

20. *Cf. United States v. Virginia*, 518 U.S. 515, 532 n.6 (1996).

21. *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715, 720 (7<sup>th</sup> Cir. 2007), *cert. denied* 15-1827, June 26, 2017 (“*Northern Contracting III*”).

22. *Western States Paving Co., Inc. v. Washington Department of Transportation*, 407 F.3d 983 (9<sup>th</sup> Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).



scrutiny.<sup>23</sup> The courts have held there are no equal protection implications under the Fourteenth Amendment of the United States Constitution for groups not subject to systemic discrimination.<sup>24</sup> In contrast to strict scrutiny and to intermediate scrutiny, rational basis means the governmental action must be “rationally related” to a “legitimate” government interest.<sup>25</sup> Thus, preferences for persons with disabilities or veteran status, or programs for small businesses, may be enacted with vastly less evidence than that required for race- or gender-based measures to combat historic discrimination.

Unlike most legal challenges, the defendant bears the initial burden of producing “strong evidence” in support of its race-conscious program.<sup>26</sup> As held by the Fifth Circuit, the plaintiff must then proffer evidence to rebut the government’s case, and bears the ultimate burden of production and persuasion that the affirmative action program is unconstitutional.<sup>27</sup> “[W]hen the proponent of an affirmative action plan produces sufficient evidence to support an inference of discrimination, the plaintiff must rebut that inference in order to prevail.”<sup>28</sup>

A plaintiff “cannot meet its burden of proof through conjecture and unsupported criticism of [the government’s] evidence.”<sup>29</sup> To successfully rebut the government’s evidence, a plaintiff must introduce “credible, particularized evidence” that rebuts the government’s showing of a strong basis in evidence.<sup>30</sup> For example, in the challenge to the Minnesota and Nebraska DBE programs, “plaintiffs presented evidence that the data was susceptible to multiple interpretations, but they failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in federally-assisted highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.”<sup>31</sup> When the statistical information is sufficient to support the inference of discrimi-

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23. See, generally, *Coral Construction Co v. King County*, 941 F.2d 910 (9<sup>th</sup> Cir. 1991); *Equal. Found. v. City of Cincinnati*, 128 F.3d 289 (6<sup>th</sup> Cir. 1997).
  24. *United States v. Carolene Products Co.*, 304 U.S. 144 (1938).
  25. *Heller v. Doe*, 509 U.S. 312, 320 (1993).
  26. *Aiken v. City of Memphis*, 37 F.3d 1155, 1162 (6<sup>th</sup> Cir. 1994).
  27. *Scott*, 199 F.3d at 219; *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147 (10<sup>th</sup> Cir. 2000), cert. granted, 532 U.S. 941, then dismissed as improvidently granted, 534 U.S. 103 (2001) (“*Adarand VII*”).
  28. *Engineering Contractors Association of South Florida, Inc. v. Metropolitan Dade County*, 122 F.3d 895, 916 (11<sup>th</sup> Cir. 1997) (“*Engineering Contractors II*”).
  29. *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 989 (10<sup>th</sup> Cir. 2003), cert. denied, 540 U.S. 1027 (2003) (“*Concrete Works IV*”).
  30. *H.B. Rowe Co., Inc. v. Tippett*, 615 F.3d 233 (4<sup>th</sup> Cir. 2010); *Midwest Fence Corp. v. US Department of Transportation, Illinois Department of Transportation, Illinois State Toll Highway Authority*, 840 F.3d 932 (7<sup>th</sup> Cir. 2016) (“*Midwest Fence II*”).
  31. *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d. 964, 970 (8<sup>th</sup> Cir. 2003), cert. denied, 541 U.S. 1041 (2004).

nation, the plaintiff must prove that the statistics are flawed.<sup>32</sup> A plaintiff cannot rest upon general criticisms of studies or other related evidence; it must meet its burden that the government's proof is inadequate to meet strict scrutiny, rendering the legislation or government program illegal.<sup>33</sup>

To meet strict scrutiny, studies have been conducted to gather the statistical and anecdotal evidence necessary to support the use of race- and gender-conscious measures to combat discrimination. These are commonly referred to as "disparity studies" because they analyze any disparities between the opportunities and experiences of minority- and women-owned firms and their actual utilization compared to White male-owned businesses. Quality studies also examine the elements of the agency's program to determine whether it is sufficiently narrowly tailored. The following is a detailed discussion of the legal parameters and the requirements for conducting studies to support defensible programs.

## **B. Elements of Strict Scrutiny**

In its decision in *City of Richmond v. J.A. Croson Co.*, the United States Supreme Court established the constitutional contours of permissible race-based public contracting programs. Reversing long established Equal Protection jurisprudence, the Court, for the first time, extended the highest level of judicial examination from measures designed to limit the rights and opportunities of minorities to legislation that inures to the benefit of these victims of historic discrimination. Strict scrutiny requires that a government entity prove both its "compelling governmental interest" in remediating identified discrimination based upon "strong evidence" and that the measures adopted to remedy that discrimination are "narrowly tailored" to that evidence. However benign the government's motive, race is always so suspect a classification that its use must pass the highest constitutional test of "strict scrutiny".

The Court struck down the City of Richmond's Minority Business Enterprise Plan ("Plan") because it failed to satisfy the strict scrutiny analysis applied to "race-based" government programs. The City's "set-aside" Plan required prime contractors awarded City construction contracts to subcontract at least 30 percent of the project to Minority-Owned Business Enterprises ("MBEs"). A business located anywhere in the nation was eligible to participate so long as it was at least 51 percent owned and controlled by minority citizens or lawfully-admitted permanent residents.

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32. *Coral Construction*, 941 F. 2d. 910 (9th Cir. 1991), at 921; *Engineering Contractors II*, 122 F.3d at 895, 916.

33. *Adarand VII*, 228 F.3d at 1166; *Engineering Contractors II*, 122 F.3d at 916; *Concrete Works of Colorado, Inc. v. City and County of Denver*, 36 F.3d 1513, 1522-1523 (10th Cir. 1994) ("*Concrete Works II*"); *Webster v. Fulton County, Georgia*, 51 F.Supp.2d 1354, 1364 (N.D. Ga. 1999), *aff'd per curiam*, 218 F. 3d 1267 (11th Cir. 2000); *see also Wygant v. Jackson Board of Education*, 476 U.S. 267, 277-278 (1986).

The Plan was adopted following a public hearing during which no direct evidence was presented that the City had discriminated on the basis of race in contracts or that its prime contractors had discriminated against minority subcontractors. The only evidence before the City Council was: (a) Richmond's population was 50 percent Black, yet less than one percent of its prime construction contracts had been awarded to minority businesses; (b) local contractors' associations were virtually all White; (c) the City Attorney's opinion that the Plan was constitutional; and (d) generalized statements describing widespread racial discrimination in the local, Virginia, and national construction industries.

In affirming the court of appeals' determination that the Plan was unconstitutional, Justice Sandra Day O'Connor's plurality opinion rejected the extreme positions that local governments either have *carte blanche* to enact race-based legislation or must prove their own active participation in discrimination:

[A] state or local subdivision...has the authority to eradicate the effects of private discrimination within its own legislative jurisdiction... [Richmond] can use its spending powers to remedy private discrimination, if it identifies that discrimination with the particularity required by the Fourteenth Amendment...[I]f the City could show that it had essentially become a "passive participant" in a system of racial exclusion ...[it] could take affirmative steps to dismantle such a system."<sup>34</sup>

Strict scrutiny of race-based remedies is required to determine whether racial classifications are in fact motivated by notions of racial inferiority or blatant racial politics. This highest level of judicial review "smokes out" illegitimate uses of race by ensuring that the legislative body is pursuing an important enough goal to warrant use of a highly suspect tool.<sup>35</sup> It also ensures that the means chosen "fit" this compelling goal so closely that there is little or no likelihood that the motive for the classification was illegitimate racial prejudice or stereotype. The Court made clear that strict scrutiny is designed to expose racial stigma; racial classifications are said to create racial hostility if they are based on notions of racial inferiority.

Richmond's evidence was found to be lacking in every respect. The City could not rely upon the disparity between its utilization of MBE prime contractors and Richmond's minority population because not all minority persons would be qualified to perform construction projects; general population representation is irrelevant. No data were presented about the availability of MBEs in either the relevant market area or their utilization as subcontractors on City projects.

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34. 488 U.S. at 491-92.

35. See also *Grutter v. Bollinger*, 539 U.S. 306, 327 (2003) ("Not every decision influenced by race is equally objectionable, and strict scrutiny is designed to provide a framework for carefully examining the importance and the sincerity of the reasons advanced by the governmental decisionmaker for the use of race in that particular context.").

According to Justice O'Connor, the extremely low MBE membership in local contractors' associations could be explained by "societal" discrimination or perhaps Blacks' lack of interest in participating as business owners in the construction industry. To be relevant, the City would have to demonstrate statistical disparities between eligible MBEs and actual membership in trade or professional groups. Further, Richmond presented no evidence concerning enforcement of its own anti-discrimination ordinance. Finally, the City could not rely upon Congress' determination that there has been nationwide discrimination in the construction industry. Congress recognized that the scope of the problem varies from market to market, and, in any event, it was exercising its powers under Section Five of the Fourteenth Amendment. Local governments are further constrained by the Amendment's Equal Protection Clause.

In the case at hand, the City has not ascertained how many minority enterprises are present in the local construction market nor the level of their participation in City construction projects. The City points to no evidence that qualified minority contractors have been passed over for City contracts or subcontracts, either as a group or in any individual case. Under such circumstances, it is simply impossible to say that the City has demonstrated "a strong basis in evidence for its conclusion that remedial action was necessary."<sup>36</sup>

This analysis was applied only to Blacks. The Court emphasized that there was "absolutely no evidence" of discrimination against other minorities. "The random inclusion of racial groups that, as a practical matter, may have never suffered from discrimination in the construction industry in Richmond, suggests that perhaps the City's purpose was not in fact to remedy past discrimination."<sup>37</sup>

Having found that Richmond had not presented evidence in support of its compelling interest in remediating discrimination—the first prong of strict scrutiny—the Court made two observations about the narrowness of the remedy—the second prong of strict scrutiny. First, Richmond had not considered race-neutral means to increase MBE participation. Second, the 30 percent quota had no basis in evidence, and was applied regardless of whether the individual MBE had suffered discrimination.<sup>38</sup> The Court noted that the City "does not even know how many MBEs in the relevant market are qualified to undertake prime or subcontracting work in public construction projects."<sup>39</sup>

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36. *Croson*, 488 U.S. at 510.

37. *Id.*

38. *See Grutter*, 529 U.S. at 336-337 (quotas are not permitted; race must be used in a flexible, non-mechanical way).

39. *Croson*, 488 U.S. at 502.

Apparently recognizing that her opinion might be misconstrued to eliminate all race-conscious contracting efforts, Justice O'Connor closed with these admonitions:

Nothing we say today precludes a state or local entity from taking action to rectify the effects of identified discrimination within its jurisdiction. If the City of Richmond had evidence before it that non-minority contractors were systematically excluding minority businesses from subcontracting opportunities, it could take action to end the discriminatory exclusion. Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise. Under such circumstances, the City could act to dismantle the closed business system by taking appropriate measures against those who discriminate based on race or other illegitimate criteria. In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion... Moreover, evidence of a pattern of individual discriminatory acts can, if supported by appropriate statistical proof, lend support to a local government's determination that broader remedial relief is justified.<sup>40</sup>

While much has been written about *Croson*, it is worth stressing what evidence was and was not before the Court. First, Richmond presented *no* evidence regarding the availability of MBEs to perform as prime contractors or subcontractors and *no* evidence of the utilization of minority-owned subcontractors on City contracts.<sup>41</sup> Nor did Richmond attempt to link the remedy it imposed to any evidence specific to the program; it used the general population of the City rather than any measure of business availability.

Some commentators have taken this dearth of any particularized proof and argued that only the most particularized proof can suffice in all cases. They leap from the Court's rejection of Richmond's reliance on only the percentage of Blacks in the City's population to a requirement that only firms that bid or have the "capacity" or "willingness" to bid on a particular contract at a particular time can be considered in determining whether discrimination against Black businesses infects the local economy.<sup>42</sup>

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40. *Id.* at 509 (citations omitted).

41. *Id.* at 502.

42. *See, for example, Northern Contracting III*, 473 F.3d at 723.

This argument has been rejected explicitly by some courts. In denying the plaintiff's summary judgment motion to enjoin the City of New York's M/WBE construction ordinance, the court stated:

[I]t is important to remember what the *Croson* plurality opinion did and did not decide. The Richmond program, which the *Croson* Court struck down, was insufficient because it was based on a comparison of the minority population in its entirety in Richmond, Virginia (50%) with the number of contracts awarded to minority businesses (67%). There were no statistics presented regarding the number of minority-owned contractors in the Richmond area, *Croson*, 488 U.S. at 499, and the Supreme Court was concerned with the gross generality of the statistics used in justifying the Richmond program. There is no indication that the statistical analysis performed by [the consultant] in the present case, which does contain statistics regarding minority contractors in New York City, is not sufficient as a matter of law under *Croson*.<sup>43</sup>

Further, Richmond made no attempt to narrowly tailor a goal for the procurement at issue that reflected the reality of the project. Arbitrary quotas, and the unyielding application of those quotas, did not support the stated objective of ensuring equal access to City contracting opportunities. The *Croson* Court said nothing about the constitutionality of flexible goals based upon the availability of MBEs to perform the scopes of the contract in the government's local market area. In contrast, the USDOT DBE program avoids these pitfalls. 49 C.F.R. Part 26 "provides for a flexible system of contracting goals that contrasts sharply with the rigid quotas invalidated in *Croson*."

While strict scrutiny is designed to require clear articulation of the evidentiary basis for race-based decision-making and careful adoption of remedies to address discrimination, it is not, as Justice O'Connor stressed, an impossible test that no proof can meet. Strict scrutiny need not be "fatal in fact".

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43. *North Shore Concrete and Associates, Inc. v. City of New York*, 1998 U.S. Dist. Lexis 6785, \*28-29 (E.D. N.Y. 1998); see also *Harrison & Burrowes Bridge Constructors, Inc. v. Cuomo*, 981 F.2d 50, 61-62 (2<sup>nd</sup> Cir. 1992) ("Croson made only broad pronouncements concerning the findings necessary to support a state's affirmative action plan"); cf. *Concrete Works II*, 36 F.3d at 1528 (City may rely on "data reflecting the number of MBEs and WBEs in the marketplace to defeat the challenger's summary judgment motion").

## C. Strict Scrutiny as Applied to DFW's Disadvantaged Business Enterprise Programs

### 1. Elements of DBE Programs

In *Adarand v. Peña*,<sup>44</sup> the Supreme Court again overruled long settled law and extended the analysis of strict scrutiny under the Equal Protection Clause of the Fourteenth Amendment to federal enactments. To comply with *Adarand*, Congress reviewed and revised the DBE program statute<sup>45</sup> and implementing regulations<sup>46</sup> for federal-aid contracts in the transportation industry. The DBE program statute governs the Airport's receipt of federal funds from the Federal Aviation Administration ("FAA").

To date, every court that has considered the issue has found the regulations to be constitutional on their face.<sup>47</sup> These cases provide important guidance to DFW about how to narrowly tailor its DBE program, as well as its initiatives for its locally-funded contracts.

All courts have held that Congress had strong evidence of widespread racial discrimination in the construction industry. The Ninth Circuit held that "[i]n light of the substantial body of statistical and anecdotal material considered at the time of TEA-21's enactment, Congress had a strong basis in evidence for concluding that, in at least some parts of the country, discrimination within the transportation contracting industry hinders minorities' ability to compete for federally-funded contracts." Relevant evidence before Congress included:

- Disparities between the earnings of minority-owned firms and similarly situated non-minority owned firms;
- Disparities in commercial loan denial rates between Black business owners compared to similarly situated non-minority business owners;
- The large and rapid decline in minorities' participation in the construction industry when affirmative action programs were struck down or abandoned; and

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44. *Adarand III*, 515 U.S. 200 (1995).

45. See the Transportation Equity Act for the 21st Century ("TEA-21"), Pub. L. No. 105-178 (b)(1), June 22, 1998, 112 Stat. 107, 113.

46. 49 C.F.R. Part 26.

47. See, for example, *Midwest Fence II*, 840 F.3d at 932; *Northern Contracting III*, 473 F.3d at 715; *Associated General Contractors of America, San Diego Chapter, Inc., v. California Department of Transportation*, 713 F.3d 1187, 1198 (9th Cir. 2013); *Western States*, 407 F.3d at 983, 994; *Adarand VII*, 228 F.3d at 1147; *M.K. Weeden Construction v. Montana Department of Transportation*, 2013 WL 4774517 (D. Mont.) (September 4, 2013).

- Various types of overt and institutional discrimination by prime contractors, trade unions, business networks, suppliers, and sureties against minority contractors.<sup>48</sup>

Next, the regulations were facially narrowly tailored. Unlike the prior program,<sup>49</sup> the new Part 26 provides that:

- The overall goal must be based upon demonstrable evidence of the number of DBEs ready, willing, and able to participate on the recipient's federally-assisted contracts.
- The goal may be adjusted to reflect the availability of DBEs "but for" the effects of the DBE program and of discrimination.
- The recipient must meet the maximum feasible portion of the goal through race-neutral measures as well as estimate that portion of the goal it predicts will be met through such measures.
- The use of quotas and set-asides is limited to only those situations where there is no other remedy.
- The goals are to be adjusted during the year to remain narrowly tailored.
- Absent bad faith administration of the program, a recipient cannot be penalized for not meeting its goal.
- Exemptions or waivers from program requirements are available.
- The presumption of social disadvantage for racial and ethnic minorities and women is rebuttable, "wealthy minority owners and wealthy minority firms are excluded, and certification is available to persons who are not presumptively disadvantaged but can demonstrate actual social and economic disadvantage."<sup>50</sup>

These elements have led the courts to conclude that the program is narrowly tailored on its face. First, the regulations place strong emphasis on the use of race-neutral means that assist all small firms to achieve minority and women participation. DFW must also estimate the portion of the goal it predicts will be met through race-neutral and race-conscious measures (contract goals).<sup>51</sup> This requirement has been central to the holdings that the DBE regulations meet narrow tailoring.<sup>52</sup> Further, a recipient may terminate race-conscious contract goals if it meets its annual overall goal through race-neutral means for

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48. *Western States*, 407 F.3d at 992-93.

49. The DBE program regulation in effect prior to March of 1999 was set forth in 49 C.F.R. Part 23.

50. *Sherbrooke*, 345 F.3d. at 973.

51. 49 CFR § 26.45(f)(3).

52. *See, e.g., Sherbrooke*, 345 F.3d. at 973.



two consecutive years. Finally, the authorizing legislation is subject to Congressional reauthorization that will ensure periodic public debate.

In 2015, Congress reauthorized the DBE program and again concluded that the evidence before it “provided a strong basis” to continue the program.<sup>53</sup>

## **2. Narrowly Tailoring DFW’s DBE Program**

Airports that receive FAA grants for airport planning or development and award prime contracts for projects that equal or exceed an accumulative amount of \$250,000.00 in a fiscal year must have a DBE program and must meet related requirements as an expressed condition of receiving these funds. Therefore, DFW must establish a DBE program plan in conformance with 49 C.F.R. Part 26.

DFW must use a two-step goal-setting process to establish its overall triennial DBE goal for FAA funded contracts. DFW’s overall triennial goal must be based upon the relative availability of DBEs and reflect the level of DBE participation that would be expected absent the effects of discrimination.<sup>54</sup>

Under Step 1, DFW must determine the base figure for the relative availability of DBEs, and one approved method is to use data from a disparity study.<sup>55</sup> Under Step 2, the Airport must examine all evidence available in its jurisdiction to determine whether to adjust the base figure. DFW must consider the current capacity of DBEs as measured by the volume of work DBEs have performed in recent years.<sup>56</sup>

In addition to the overall goal, DFW must set narrowly tailored goals on specific FAA funded contracts where warranted. DFW is required to set contract goals based upon the availability of DBEs to perform anticipated work scopes—including the work estimated to be performed by the prime contractor—of the individual contract.<sup>57</sup>

Programs based upon studies similar to the “custom census” methodology employed for this Report have been deemed a rich and relevant source of data and have been upheld repeatedly. This includes the availability analysis and the examination of disparities in the business formation rates and business earnings of minorities and women compared to similarly situated non-minority males. The Illinois Department of Transportation’s (IDOT’s) DBE program was

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53. Fixing America’s Surface Transportation Act (Fast Act), Pub. L. No. 114-94, Section 1101 (b), 129 Stat. 1323-1325 (23 U.S.C. 101 *et. seq.*) (2015).

54. 49 C.F.R. § 26.45(b).

55. 49 C.F.R. § 26.45(c)(3).

56. 49 C.F.R. § 26.45(d)(1)(i).

57. 49 C.F.R. § 26.51 (e)(2).

upheld based on this approach combined with other economy-wide and anecdotal evidence. The USDOT's institutional guidance for Part 26 refers approvingly to this case. IDOT's plan was based upon sufficient proof of discrimination such that race-neutral measures alone would be inadequate to assure that DBEs operate on a "level playing field" for government contracts.

The stark disparity in DBE participation rates on goals and non-goals contracts, when combined with the statistical and anecdotal evidence of discrimination in the relevant marketplaces, indicates that IDOT's 2005 DBE goal represents a "plausible lower-bound estimate" of DBE participation in the absence of discrimination... Plaintiff presented no persuasive evidence contravening the conclusions of IDOT's studies, or explaining the disparate usage of DBEs on goals and non-goals contracts... IDOT's proffered evidence of discrimination against DBEs was not limited to alleged discrimination by prime contractors in the award of subcontracts. IDOT also presented evidence that discrimination in the bonding, insurance, and financing markets erected barriers to DBE formation and prosperity. Such discrimination inhibits the ability of DBEs to bid on prime contracts, thus allowing the discrimination to indirectly seep into the award of prime contracts, which are otherwise awarded on a race- and gender-neutral basis. This indirect discrimination is sufficient to establish a compelling governmental interest in a DBE program... Having established the existence of such discrimination, a governmental entity has a compelling interest in assuring that public dollars, drawn from the tax contributions of all citizens, do not serve to finance the evil of private prejudice.<sup>58</sup>

In upholding the Minnesota Department of Transportation's DBE program using the same approach, the Eighth Circuit opined that while plaintiff attacked the study's data and methods, it

failed to establish that better data was [sic] available or that Mn/DOT was otherwise unreasonable in undertaking this thorough analysis and in relying on its results. The precipitous drop in DBE participation in 1999, when no race-conscious methods were employed, supports Mn/DOT's conclusion that a substantial portion of its 2001 overall goal could not be met with race-neutral measures, and there is no evidence that Mn/DOT failed to adjust its use of race-conscious and race-neutral

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58. *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2005 U.S. Dist. LEXIS 19868 (Sept. 8, 2005) ("*Northern Contracting II*"); see *Croson*, 488 U.S. at 492.

methods as the year progressed, as the DOT regulations require.<sup>59</sup>

More recently, the Seventh Circuit affirmed the district court and upheld the Illinois Tollway's DBE program for non-federal-aid contracts based upon a Colette Holt & Associates disparity study utilizing this methodology. Plaintiff's main objection to the defendant's evidence was that it failed to account for "capacity" when measuring DBE availability and underutilization. As is well established, "Midwest would have to come forward with "credible, particularized evidence" of its own, such as a neutral explanation for the disparity between DBE utilization and availability showing that the government's data is flawed, demonstrating that the observed disparities are statistically insignificant or presenting contrasting statistical data. [citation omitted]. Plaintiff "fail[ed] to provide any independent statistical analysis or make this showing here."<sup>60</sup> Midwest offered only mere conjecture about how the defendants' studies' supposed failure to account for capacity may or may not have impacted other evidence demonstrating actual bias.

As recently as 2017, another district court found the DBE program and its implementing regulations to be constitutional.<sup>61</sup> This criminal case originated from alleged fraud on the program. The court rejected defendant's challenge to the USDOT's authority to promulgate the federal regulations and determined that the regulatory legislative history and executive rulemaking were made under the broad grant of rights authorized by Congressional statutes.

### **3. Narrowly Tailoring DFW's Airport Concessions DBE Program**

The Airport Concession Disadvantaged Enterprise ("ACDBE") Program<sup>62</sup> applies to primary/commercial service airports that receive Airport Improvement Program funding and that have concession revenues of \$200,000.00 or more for either car rental or non-car rental concessions. 49 C.F.R. Part 23 incorporates Part 26's provisions by reference. Part 23 differs from Part 26 in the small business size standards to establish the firm as a small business concern.<sup>63</sup>

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59. *Sherbrooke*, 3345 F.3d at 973.

60. *See Midwest Fence II*, 840 F.3d at 932.

61. *United States v. Taylor*, 232 F. Supp. 3d 741 (W.D. Penn. 2017).

62. 49 C.F.R. Part 23.

63. The ACDBE's gross receipts, averaged over the firm's previous three fiscal years, cannot exceed \$56.42 million, with the exceptions of banks (\$1 billion in assets); car rental companies (\$75.23 million average annual gross receipts over the firm's three previous fiscal years, as adjusted by the USDOT for inflation every two years from April 3, 2009); pay telephones (1,500 employees); and automobile dealers (350 employees). The USDOT adjusts the numbers for ACDBEs that are not banks, pay telephones or automobile dealers using the U.S. Department of Commerce price deflators for purchases by state and local governments as the basis for this adjustment. *See* 49 C.F.R. § 23.33.

Under the ACDBE regulations, DFW must establish two separate overall ACDBE goals: one for car rentals and another for concessions other than car rentals. Similar to the Part 26 program, an airport sponsor follows the two-step goal setting procedures contained in § 23.51. As with § 26.45, after determining the total gross receipts for the concession activity, the first step is to establish the relative availability of ACDBEs in the market area, that is, the step one “base figure”. The second step is to examine all relevant evidence reasonably available in the sponsor’s jurisdiction to determine if an adjustment to the step one “base figure” is necessary so that the goal reflects as accurately as possible the ACDBE participation the sponsor would expect in the absence of discrimination. Evidence may include, but is not limited to, past participation by ACDBEs, a disparity study, or evidence from related fields that affect ACDBE opportunities to form, grow, and compete (such as statistical disparities in ability to get required financing, bonding, and insurance; or data on employment, self-employment, education, training and union apprenticeship).

There is little or no case law specifically related to the USDOT ACDBE program. The FAA and its recipients follow the strictures and standards for the DBE program, and the concessions regulations explicitly incorporate Part 26.<sup>64</sup>

## **D. Strict Scrutiny as Applied to DFW’s Minority- and Women-Owned Business Enterprise Program**

### **1. Establishing a “Strong Basis in Evidence” for DFW’s M/WBE Program**

The case law on the USDOT DBE program should guide DFW’s program for locally-funded contracts. As discussed, Part 26 has been upheld by every court, and local programs for M/WBEs will be judged under this legal framework.<sup>65</sup> We note that programs for veterans, persons with disabilities or truly race- and gender-neutral small business efforts are not subject to strict scrutiny, and no evidence comparable to that in a disparity study is needed to enact such initiatives.

While Congress evaluated the evidence of discrimination against M/WBEs in the federal marketplace, a local agency must conduct its own fact-finding. It is well established that disparities between an agency’s utilization of M/WBEs and their availability in the relevant marketplace provide a sufficient basis for

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64. See § 23.51(a)(2) that mirrors § 25.45 (recipient is to determine the extent, if any, to which the firms in its market area have suffered discrimination or its effects in connection with concession opportunities or related business opportunities).

65. *Midwest Fence II*, 840 F.3d. at 953.

the consideration of race- or gender-conscious remedies. Proof of the disparate impacts of economic factors on M/WBEs and the disparate treatment of such firms by actors critical to their success will meet strict scrutiny. Discrimination must be shown using statistics and econometric models to examine the effects of systems or markets on different groups, as well as by evidence of personal experiences with discriminatory conduct, policies or systems.<sup>66</sup> Specific evidence of discrimination or its absence may be direct or circumstantial and should include economic factors and opportunities in the private sector affecting the success of M/WBEs.<sup>67</sup>

*Croson's* admonition that "mere societal" discrimination is insufficient to meet strict scrutiny is met where the government presents evidence of discrimination in the industry targeted by the program. "If such evidence is presented, it is immaterial for constitutional purposes whether the industry discrimination springs from widespread discriminatory attitudes shared by society or is the product of policies, practices, and attitudes unique to the industry... The genesis of the identified discrimination is irrelevant."<sup>68</sup> There is no requirement to "show the existence of specific discriminatory policies and that those policies were more than a reflection of societal discrimination."<sup>69</sup>

The Airport need not prove that it is itself guilty of discrimination in order to meet its burden. In upholding Denver's M/WBE construction program, the court stated that Denver can show its compelling interest by "evidence of private discrimination in the local construction industry coupled with evidence that it has become a passive participant in that discrimination...[by] linking its spending practices to the private discrimination."<sup>70</sup> Denver further linked its award of public dollars to discriminatory conduct through the testimony of M/WBEs that identified general contractors who used them on City projects with M/WBE goals but refused to use them on private projects without goals.

The following are the evidentiary elements courts have looked to in examining the basis for, and determining the constitutional validity of, race- and gender-conscious local programs and the steps in performing a disparity study necessary to meet those elements.

**a. Define DFW's Market Areas**

The first step is to determine the market areas in which DFW operates. *Croson* states that a state or local government may remedy discrimination

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66. *Adarand VII*, 228 F.3d at 1166 ("statistical and anecdotal evidence are appropriate").

67. *Id.*

68. 488 U.S. at 472.

69. *Concrete Works IV*, 321 F.3d at 976.

70. *Id.* at 977.

only within its own contracting market area. The City of Richmond was faulted for including minority contractors from across the country in its program, based on national data considered by Congress.<sup>71</sup> The Airport must therefore empirically establish the geographic and product dimensions of its contracting and procurement market area to ensure that the program meets strict scrutiny. This is a fact-driven inquiry; it may or may not be the case that the market area extends beyond the governmental entity's jurisdictional boundaries.<sup>72</sup>

A commonly accepted definition of the geographical market area for disparity studies is the locations that account for 75 percent of the agency's contract and subcontract dollar amounts.<sup>73</sup> Similarly, the prevailing approach is to analyze those detailed industries that make up at least 75 percent of the prime contract and associated subcontract payments for the study period.<sup>74</sup> This produces the utilization results within the geographic market area.

**b. Examine Disparities between DFW's Utilization of M/WBEs and M/WBE Availability**

Next, the study must estimate the availability of minorities and women to participate in DFW's contracts as prime contractors and associated subcontractors compared to its utilization of such firms. The primary inquiry is whether there are statistically significant disparities between the availability of M/WBEs and their utilization.

Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise... In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion.<sup>75</sup>

This is known as the "disparity ratio" or "disparity index". A disparity ratio measures the participation of a group in the government's contracting opportunities by dividing that group's utilization by the availability of that

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71. *Croson*, 488 U.S. at 508.

72. *Concrete Works II*, 36 F.3d at 1520 (to confine data to strict geographic boundaries would ignore "economic reality").

73. National Academies of Sciences, Engineering, and Medicine 2010, *Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/14346>. ("National Disparity Study Guidelines").

74. *Id.* at pp. 50-51.

75. *Croson*, 488 U.S. at 509; see also *Webster*, 51 F.Supp.2d at 1363, 1375.

group and multiplying that result by 100. Courts have looked to disparity indices in determining whether strict scrutiny is satisfied.<sup>76</sup> An index of less than 100 percent indicates that a given group is being utilized less than would be expected based on its availability, and courts have adopted the Equal Employment Opportunity Commission's "80 percent" rule that a ratio less than 80 percent presents a *prima facie* case of discrimination.<sup>77</sup> Where possible, statistical techniques are applied to examine whether any disparities are significant. In addition to creating the disparity ratio, correct measures of availability are necessary to determine whether discriminatory barriers depress the formation of firms by minorities and women, and the success of such firms in doing business in both the private and public sectors, known as an "economy-wide" analysis.<sup>78</sup>

While there have been few cases in this area in the Fifth Circuit, we note that the failure to engage in this type of statistical analysis led to the demise of the City of Jackson's program many years ago.<sup>79</sup> The City had adopted an MBE program and set a 15 percent overall goal for City contracts. It had commissioned and later rejected a disparity study, and no other evidentiary efforts were made to support the continued application of the program. After holding that the plaintiff had standing to pursue his case since his low bid providing one percent DBE participation had been rejected, the Fifth Circuit upheld the district court's ruling that Jackson's failure to rely upon a study was fatal to its argument that it had a strong basis in evidence.

To determine disparity ratios once utilization has been established, the next step is to calculate the availability of minority- and women-owned firms in the government's market area. Based on the product and geographic utilization data, the study should calculate weighted M/WBE availability estimates of "ready, willing and able" firms in the Airport's market. This is generally the "Custom Census" methodology recommended in the National Study Guidelines and repeatedly approved by the courts. This methodology includes both certified firms and non-certified firms owned by minorities or women.

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76. *Scott*, 199 F.3d at 218; *see also Concrete Works II*, 36 F.3d at 1526-1527; *O'Donnell Construction Co., Inc. v. District of Columbia*, 963 F.2d 420, 426 (D.C. Cir. 1992); *Cone Corp. v. Hillsborough County*, 908 F.2d 908, 916 (11th Cir. 1990), *cert. denied*, 498 U.S. 983 (1990).

77. 29 C.F.R. § 1607.4(D) ("A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact."); *See Engineering Contractors II*, 122 F.3d at 914.

78. *Northern Contracting II*, 2005 U.S. Dist. LEXIS 19868, at \*70 (IDOT's custom census approach was supportable because "discrimination in the credit and bonding markets may artificially reduce the number of M/WBEs").

79. *Scott*, 199 F.3d at 206.

The Custom Census calls for the following steps:

- Develop directories of M/WBEs.
- Define a subset of business data to establish the availability of all firms.
- Merge the directory with the contract data file created during the utilization analysis.
- Assign race, gender and 6-digit North American Industry Classification System codes.<sup>80</sup>

This analysis results in an overall availability estimate of the number of ready, willing and able M/WBEs that is a narrowly tailored, dollar-weighted average of all the underlying industry availability numbers, with larger weights applied to industries with relatively more spending and lower weights applied to industries with relatively less spending. The availability figures should be also sub-divided by race, ethnicity, and gender.

This approach has several benefits. As held by the federal court of appeals in finding the Illinois Department of Transportation's program to be constitutional, the "remedial nature of [DBE programs] militates in favor of a method of D/M/W/SBE availability calculation that casts a broader net" than merely using bidders lists or other agency or government directories.<sup>81</sup> A broad methodology is also recommended by the USDOT for its DBE program, which has been facially upheld by every court.<sup>82</sup>

Other methodologies relying only on vendor or bidder lists risk overstating or understating availability as a proportion of DFW's actual markets because they reflect only the results of the agency's own activities, not an accurate portrayal of marketplace behavior. Other methods of whittling down availability by using assumptions based on surveys with limited response rates or guesses about firms' capacities easily lead to findings that women and minority businesses no longer face discrimination<sup>83</sup> or are unavailable, even when the firm is actually working on agency contracts.<sup>84</sup>

Many plaintiffs have argued that studies must somehow control for the "capacity" of M/WBEs to perform specific agency contracts. The definition

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80. See *National Disparity Study Guidelines*, Chapter III, pp. 33-34.

81. *Northern Contracting III*, 473 F.3d at 723.

82. See "Tips for Goal Setting in the Disadvantaged Business Enterprise (DBE) Program", [https://www.transportation.gov/sites/dot.gov/files/docs/Tips\\_for\\_Goal-Setting\\_in\\_DBE\\_Program\\_20141106.pdf](https://www.transportation.gov/sites/dot.gov/files/docs/Tips_for_Goal-Setting_in_DBE_Program_20141106.pdf).

83. Examples include the Oregon Department of Transportation's study and the Washington State Department of Transportation's 2012 study.

84. For example, the study for the City of Portland, Oregon used this approach.



of “capacity” has varied based upon the plaintiff’s particular point of view, but it has generally meant bonding limits, firm size, firm revenues, and prior experience on agency projects (no argument has been made outside of the construction industry).

This argument has been rejected by the courts when directly addressed by the plaintiff and the agency. As recognized by the courts and the National Model Disparity Study Guidelines, size and experience are not race- and gender-neutral variables. Discriminatory barriers depress the formation of firms by minorities and women as well as the success of such firms in doing business in both the private and public sectors. It is with these types of “capacity” variables where barriers to full and fair opportunities to compete will be manifested. Based upon expert testimony, judges understand that factors such as size and experience are not race- and gender-neutral variables: “M/WBE construction firms are generally smaller and less experienced *because* of discrimination.”<sup>85</sup>

Capacity limitations on availability would import the current effects of past discrimination into the model, because if M/WBEs are newer or smaller because of discrimination, then controlling for those variables will mask the phenomenon of discrimination that is being studied. In short, identifiable indicators of capacity are themselves impacted by, and reflect, discrimination. To rebut this inference, a plaintiff must proffer its own study showing that the disparities disappear when such variables are held constant and that controlling for firm specialization explained the disparities. Conjecture and unsupported criticism of the government are not enough. The plaintiff must rebut the government’s evidence and introduce “credible, particularized evidence” of its own.<sup>86</sup> Additionally, *Croson* does not “require disparity studies that measure whether construction firms are able to perform a *particular contract*.”<sup>87</sup>

Capacity variables should be examined at the economy-wide level of business formation and earnings, discussed below, not at the first stage of the analysis, to reduce the downward bias that discrimination imposes on M/WBEs’ availability and the upward bias enjoyed by non-M/WBEs.

DFW need not prove that statistical inferences of discrimination are “correct”. In upholding Denver’s M/WBE program, the Tenth Circuit noted that strong evidence supporting Denver’s determination that remedial action was necessary need not have been based upon “irrefutable or definitive”

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85. *Concrete Works IV*, 321 F.3d at 983 (emphasis in the original).

86. *See Midwest Fence II*, 840 F.3d at 942 (upholding the Illinois Tollway’s program for state-funded contracts modelled after Part 26 and based on Colette Holt & Associate’s expert witness testimony).

87. 488 U.S. at 508 (emphasis in the original).

proof of discrimination. Statistical evidence creating inferences of discriminatory motivations was sufficient, and therefore, evidence of market area discrimination was properly used to meet strict scrutiny. To rebut this type of evidence, the plaintiff must prove by a preponderance of the evidence that such proof does not support those inferences.<sup>88</sup>

Nor must the Airport demonstrate that the “ordinances will *change* discriminatory practices and policies” in the local market area; such a test would be “illogical” because firms could defeat the remedial efforts simply by refusing to cease discriminating.<sup>89</sup>

Next, DFW need not prove that private firms directly engaged in any discrimination in which the governmental entity passively participates do so intentionally, with the purpose of disadvantaging minorities and women.

Denver’s only burden was to introduce evidence which raised the inference of discriminatory exclusion in the local construction industry and link its spending to that discrimination.... Denver was under no burden to identify any specific practice or policy that resulted in discrimination. Neither was Denver required to demonstrate that the purpose of any such practice or policy was to disadvantage women or minorities. To impose such a burden on a municipality would be tantamount to requiring proof of discrimination and would eviscerate any reliance the municipality could place on statistical studies and anecdotal evidence.<sup>90</sup>

Similarly, statistical evidence by its nature cannot identify the individuals responsible for the discrimination.<sup>91</sup>

**c. Examine the Results of DFW’s Unremediated Markets**

The results of agency contracts solicited without M/WBE contract goals, to the extent such data are available, are an excellent indicator of whether discrimination continues to impact opportunities in public contracting. Evidence of race and gender discrimination in relevant “unremediated”<sup>92</sup> markets provides an important measure of what level of actual M/WBE participation can be expected in the absence of DFW mandated affirmative

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88. *Concrete Works IV*, 321 F.3d at 971.

89. *Id.* at 973 (emphasis in the original).

90. *Id.* at 971.

91. *Id.* at 973.

92. “Unremediated market” means “markets that do not have race- or gender-conscious subcontracting goals in place to remedy discrimination.” See *Northern Contracting II*, at \*36.

efforts to contract with M/WBEs.<sup>93</sup> As the Eleventh Circuit has acknowledged, “the program at issue may itself be masking discrimination that might otherwise be occurring in the relevant market.”<sup>94</sup> If M/WBE utilization is below availability in unremediated markets, an inference of discrimination may be supportable.

The courts have held that the virtual disappearance of M/WBE participation after programs have been enjoined or abandoned strongly indicates substantial barriers to minority contractors, “raising the specter of racial discrimination.”<sup>95</sup> Unremediated markets analysis indicates whether the government has been and continues to be a “passive participant” in such discrimination, in the absence of affirmative action remedies.<sup>96</sup> The court in the challenge to the City of Chicago’s M/WBE program for construction contracts held that the “dramatic decline in the use of M/WBEs when an affirmative action program is terminated, and the paucity of use of such firms when no affirmative action program was ever initiated”, was proof of the City’s compelling interest in employing race- and gender-conscious measures.<sup>97</sup> Evidence of unremediated markets “sharpen[s] the picture of local market conditions for MBEs and WBEs.”<sup>98</sup>

Therefore, if M/WBEs are “overutilized” because of the entity’s program, that does not end the study’s inquiry. Where the government has been implementing affirmative action remedies, M/WBE utilization reflects those efforts; it does not signal the end of discrimination. Any M/WBE “overutilization” on projects with goals goes only to the weight of the evidence because it reflects the effects of a remedial program. For example, Denver presented evidence that goals and non-goals projects were similar in purpose and scope and that the same pool of contractors worked on both types. “Particularly persuasive” was evidence that M/WBE participation declined significantly when the program was amended in 1989; the utilization of M/WBEs on City projects had been affected by the affirmative action programs that have been in place in one form or another since 1977.

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93. See, e.g., *Western States*, 407 F.3d at 992 (Congress properly considered evidence of the “significant drop in racial minorities’ participation in the construction industry” after state and local governments removed affirmative action provisions).
94. *Engineering Contractors II*, 122 F.3d at 912.
95. *Adarand VII*, 228 F.3d at 1174.
96. See also *Contractors Association of Eastern Pennsylvania v. City of Philadelphia*, 91 F.3d 586, 599-601 (3rd Cir. 1996) (“*Philadelphia III*”).
97. *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725, 737 (N.D. Ill. 2003); (holding that City of Chicago’s M/WBE program for local construction contracts met compelling interest using this framework); see also *Concrete Works IV*, 321 F.3d at 987-988.
98. *Concrete Works II*, 36 F.3d at 1529.

**d. Analyze Economy-Wide Evidence of Race- and Gender-Based Disparities**

The courts have repeatedly held that analysis of disparities in the rates at which M/WBEs in the government's markets form businesses compared to similar non-M/WBEs, their earnings from such businesses, and their access to capital markets are highly relevant to the determination whether the market functions properly for all firms regardless of the race or gender of their ownership. As explained by the Tenth Circuit, this type of evidence

demonstrates the existence of two kinds of discriminatory barriers to minority subcontracting enterprises, both of which show a strong link between racial disparities in the federal government's disbursements of public funds for construction contracts and the channeling of those funds due to private discrimination. The first discriminatory barriers are to the formation of qualified minority subcontracting enterprises due to private discrimination, precluding from the outset competition for public construction contracts by minority enterprises. The second discriminatory barriers are to fair competition between minority and non-minority subcontracting enterprises, again due to private discrimination, precluding existing minority firms from effectively competing for public construction contracts. The government also presents further evidence in the form of local disparity studies of minority subcontracting and studies of local subcontracting markets after the removal of affirmative action programs.... The government's evidence is particularly striking in the area of the race-based denial of access to capital, without which the formation of minority subcontracting enterprises is stymied.<sup>99</sup>

These analyses also contributed to the successful defense of Chicago's construction program.

Business discrimination studies prove relevant and probative since they evince a strong link between the disbursement of public funds and the channeling of those funds due to private discrimination. "Evidence that private discrimination results in barriers to business formation is relevant because it demonstrates that M/WBEs are precluded *at the outset* from competing for public construction contracts. Evidence of barriers to fair competition is also relevant because it again demonstrates that *existing* M/WBEs are precluded from competing for public contracts."<sup>100</sup> Despite the

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99. *Adarand VII*, 228 F.3d at 1147, 1168-69.

contentions of plaintiffs that possibly dozens of factors might influence the ability of any individual to succeed in business, the courts have rejected such impossible tests and held that business formation studies are not flawed because they cannot control for subjective descriptions such as “quality of education,” “culture” and “religion”.

In unanimously upholding the USDOT DBE program, the courts agree that disparities between the earnings of minority-owned firms and similarly situated non-minority owned firms and the disparities in commercial loan denial rates between Black business owners compared to similarly situated non-minority business owners are strong evidence of the continuing effects of discrimination. The Eighth Circuit Court of Appeals took a “hard look” at the evidence Congress considered, and concluded that the legislature had

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. In rebuttal, [the plaintiffs] presented evidence that the data were susceptible to multiple interpretations, but they failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.<sup>101</sup>

**e. Evaluate Anecdotal Evidence of Race- and Gender-Based Barriers**

A disparity study should also explore anecdotal evidence of experiences with discrimination in contracting opportunities inasmuch as it proves relevant to the query whether observed statistical disparities are due to discrimination and not to some other non-discriminatory cause or causes. As observed by the Supreme Court, anecdotal evidence can be persuasive because it “brought the cold [statistics] convincingly to life”.<sup>102</sup> Testimony about discrimination practiced by prime contractors, bonding companies, suppliers, and lenders has been found relevant regarding barriers both to minority firms’ business formation and to their success on governmental projects.<sup>103</sup> While anecdotal evidence is insufficient standing alone,

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100. *Id.*

101. *Sherbrooke*, 345 F.3d. at 970; *see also Adarand VII*, 228 F.3d at 1175 (Plaintiff has not met its burden “of introducing credible, particularized evidence to rebut the government’s initial showing of the existence of a compelling interest in remedying the nationwide effects of past and present discrimination in the federal construction procurement subcontracting market.”).

102. *International Brotherhood of Teamsters v. United States*, 431 U.S. 324, 399 (1977).

103. *Adarand VII*, 228 F.3d at 1168-1172.

“[p]ersonal accounts of actual discrimination or the effects of discriminatory practices may, however, vividly complement empirical evidence. Moreover, anecdotal evidence of a [government’s] institutional practices that exacerbate discriminatory market conditions are [sic] often particularly probative.”<sup>104</sup> “[W]e do not set out a categorical rule that every case must rise or fall entirely on the sufficiency of the numbers. To the contrary, anecdotal evidence might make the pivotal difference in some cases; indeed, in an exceptional case, we do not rule out the possibility that evidence not reinforced by statistical evidence, as such, will be enough.”<sup>105</sup>

There is no requirement that anecdotal testimony be “verified” or corroborated, as befits the role of evidence in legislative decision-making as opposed to judicial proceedings. “Plaintiff offers no rationale as to why a fact finder could not rely on the State’s ‘unverified’ anecdotal data. Indeed, a fact finder could very well conclude that anecdotal evidence need not—indeed cannot—be verified because it ‘is nothing more than a witness’ narrative of an incident told from the witness’ perspective and including the witness’ perception.”<sup>106</sup> Likewise, the Tenth Circuit held that “Denver was not required to present corroborating evidence and [plaintiff] was free to present its own witnesses to either refute the incidents described by Denver’s witnesses or to relate their own perceptions on discrimination in the Denver construction industry.”<sup>107</sup>

## **2. Narrowly Tailoring an M/WBE Program for DFW**

After establishing that DFW has a strong basis in evidence to conclude that race-based measures are needed to remedy identified discrimination, its program must still be narrowly tailored to that evidence. As discussed above, local programs that closely mirror the USDOT’s DBE program have been upheld using that framework.<sup>108</sup> The courts have repeatedly examined the following factors in determining whether race-based remedies are narrowly tailored to achieve their purpose:

- The efficacy of race-neutral remedies at overcoming identified discrimination;

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104. *Concrete Works II*, 36 F.3d at 1520,1530.

105. *Engineering Contractors II*, 122 F.3d at 926.

106. *Id.* at 249.

107. *Concrete Works IV*, 321 F.3d at 989.

108. *See, e.g., Midwest Fence II*, 840 F.3d at 953 (upholding the Illinois Tollway’s program for state-funded contracts modelled after Part 26 and based on Colette Holt & Associates testimony).

- The relationship of numerical benchmarks for government spending to the availability of minority- and women-owned firms and to subcontracting goal setting procedures;
- The flexibility of the program requirements, including the provision for good faith efforts to meet goals and contract-specific goal setting procedures;
- The congruence between the remedies adopted and the beneficiaries of those remedies;
- Any adverse impact of the relief on third parties; and
- The duration of the program.<sup>109</sup>

**a. Consider Race- and Gender-Neutral Remedies**

Race- and gender-neutral approaches are a necessary component of a legally defensible and enforceable M/WBE program.<sup>110</sup> Failure to seriously consider such remedies has been fatal to several such programs.<sup>111</sup> Difficulty in accessing procurement opportunities, restrictive bid specifications, excessive experience requirements, and overly burdensome insurance and/or bonding requirements, for example, might be addressed by DFW without resorting to the use of race or gender in its decision-making. Effective remedies include unbundling of contracts into smaller contracts, paying promptly, technical assistance, and developing programs to address issues of financing, bonding, and insurance important to all small and emerging businesses.<sup>112</sup> Further, governments have a duty to ferret out and punish discrimination against minorities and women by their contractors, staff, lenders, bonding companies or others.<sup>113</sup>

The requirement that the agency must meet the maximum feasible portion of the goal through race-neutral measures, as well as estimate that portion of the goal it predicts will be met through such measures, has been central to the holdings that the DBE program regulations meet narrow tailoring.<sup>114</sup>

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109. *United States v. Paradise*, 480 U.S. 149, 171 (1987); see also *Sherbrooke*, 345 F.3d at 971-972.

110. *Croson*, 488 U.S. at 507 (Richmond considered no alternatives to race-based quota); *Associated General Contractors of Ohio v. Drabik*, 214 F.3d 730, 738 (6th Cir. 2000) (“*Drabik II*”); *Philadelphia III*, 91 F.3d at 609 (City’s failure to consider race-neutral alternatives was particularly telling); *Webster*, 51 F.Supp.2d at 1380 (for over 20 years County never seriously considered race-neutral remedies); cf. *Aiken*, 37 F.3d at 1164 (failure to consider race-neutral method of promotions suggested a political rather than a remedial purpose).

111. See, e.g., *Florida A.G.C. Council, Inc. v. State of Florida*, Case No.: 4:03-CV-59-SPM at 10 (N. Dist. Fla. 2004) (“There is absolutely no evidence in the record to suggest that the Defendants contemplated race-neutral means to accomplish the objectives” of the statute.); *Engineering Contractors II*, 122 F.3d at 928.

112. See 49 CFR § 26.51.

113. *Croson*, 488 U.S. at 503 n.3; *Webster*, 51 F.Supp.2d at 1380.

114. See, e.g., *Sherbrooke*, 345 F.3d. at 973.

However, strict scrutiny does not require that every race-neutral approach be implemented and proven ineffective before race-conscious remedies may be utilized.<sup>115</sup> While an entity must give good faith consideration to race-neutral alternatives, “strict scrutiny does not require exhaustion of every possible such alternative ... however irrational, costly, unreasonable, and unlikely to succeed such alternative might be... [S]ome degree of practicality is subsumed in the exhaustion requirement.”<sup>116</sup>

**b. Set Targeted MBE and WBE Goals**

Numerical goals or benchmarks for M/WBE participation must be substantially related to their availability in the relevant market.<sup>117</sup> For example, the USDOT DBE program regulations require that the overall goal be based upon demonstrable evidence of the number of DBEs “ready, willing, and able” to participate on the recipient’s federally-assisted contracts.<sup>118</sup> “Though the underlying estimates may be inexact, the exercise requires the States to focus on establishing realistic goals for DBE participation in the relevant contracting markets. This stands in stark contrast to the program struck down in *Croson*.”<sup>119</sup>

Goals can be set at varying levels of particularity and participation. DFW may set an overall, aspirational goal for its annual, aggregate spending. Its goal can be further disaggregated by race and gender. Approaches range from a single M/WBE or DBE goal that includes all racial and ethnic minorities and non-minority women,<sup>120</sup> to separate goals for each minority group and women.<sup>121</sup> We note, however, that Ohio’s program was specifically faulted for lumping together all “minorities,” with the court questioning the legitimacy of forcing African-American contractors to share relief with recent Asian immigrants.<sup>122</sup>

Goal setting is not an absolute science. In holding the DBE regulations to be narrowly tailored, the Eighth Circuit noted that “[t]hrough the underlying estimates may be inexact, the exercise requires the States to focus on

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115. *Grutter*, 529 U.S. at 339.

116. *Coral Construction*, 941 F.2d at 923.

117. *Webster*, 51 F.Supp.2d at 1379, 1381 (statistically insignificant disparities are insufficient to support an unexplained goal of 35 percent M/WBE participation in County contracts); see also *Associated Utility Contractors of Maryland, Inc. v. Mayor and City Council of Baltimore, et al.*, 83 F.Supp.2d 613, 621 (D. Md. 2000) (“*Baltimore I*”).

118. 49 C.F.R. § 26.45 (b).

119. *Id.*

120. See 49 C.F.R. §26.45(h). This Section states explicitly that overall goals cannot be subdivided into group-specific goals.

121. See *Engineering Contractors II*, 122 F.3d at 900 (separate goals for Blacks, Hispanics and women).

122. *Drabik II*, 214 F.3d at 730, 737; see also *Western States*, 407 F.3d at 998 (“We have previously expressed similar concerns about the haphazard inclusion of minority groups in affirmative action programs ostensibly designed to remedy the effects of discrimination.”).



establishing realistic goals for DBE participation in the relevant contracting markets.”<sup>123</sup> However, sheer speculation cannot form the basis for an enforceable measure.<sup>124</sup>

It is settled case law that goals for a particular solicitation should reflect the specifics of the contract, rather than reiterate annual aggregate targets. Goals must be contract-specific. “Standard” goals, such as for “construction” or “professional services,” are not defensible. Contract goals must be based upon the availability of M/WBEs to perform the anticipated scopes of the contract, location, progress towards meeting annual goals, and other factors. Not only is this legally mandated,<sup>125</sup> but this approach also reduces the need to conduct good faith efforts reviews, as well as the temptation to create “front” companies and sham participation to meet unreasonable contract goals. While this is more labor intensive than defaulting to the annual, overall goals or “standard” goals, there is no option to avoid meeting narrow tailoring because to do so would be more burdensome.

**c. Ensure Flexibility of Goals and Requirements**

It is imperative that remedies not operate as fixed quotas.<sup>126</sup> A M/WBE program must provide for contract awards to firms that fail to meet the contract goals but make adequate good faith efforts to do so.<sup>127</sup> Further, firms that meet the goals cannot be favored over those that made good faith efforts. In *Croson*, the Court refers approvingly to the contract-by-contract waivers used in the USDOT’s DBE program.<sup>128</sup> This feature has proven critical to the holding that the DBE program meets the narrow tailoring requirement.<sup>129</sup>

**d. Review Program Eligibility for Over-Inclusiveness and Under-Inclusiveness**

The over- or under-inclusiveness of persons included in DFW’s program is an additional consideration and addresses whether the remedies truly target the evil identified. The “fit” between the problem and the remedy

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123. *Sherbrooke*, 345 F.3d. at 972.

124. *BAGC v. Chicago*, 298 F.Supp.2d at 740 (City’s MBE and WBE goals were “formulistic” percentages not related to the availability of firms).

125. *See Sherbrooke*, 345 F.3d at 972; *Coral Construction*, 941 F.2d at 924.

126. *See* 49 C.F.R 26.43 (quotas are not permitted and setaside contracts may be used only in limited and extreme circumstances “when no other method could be reasonably expected to redress egregious instances of discrimination”).

127. *See, e.g., BAGC v. Chicago*, 298 F. Supp.2d at 740 (“Waivers are rarely or never granted...The City program is a rigid numerical quota...formulistic percentages cannot survive strict scrutiny.”).

128. 488 U.S. at 508; *see also Adarand VII*, 228 F.3d at 1181.

129. *See, e.g., Sherbrooke*, 345 F.3d. at 972; *Webster*, 51 F. Supp. 2d at 1354, 1380.

manifests in three ways: which groups to include; how to define those groups; and which persons will be eligible to be included within those groups.

The groups included must be based upon the evidence.<sup>130</sup> The “random inclusion” of ethnic or racial groups that may never have experienced discrimination in the entity’s market area may indicate impermissible “racial politics”.<sup>131</sup> In striking down Cook County, Illinois’ construction program, the Seventh Circuit remarked that a “state or local government that has discriminated just against blacks may not by way of remedy discriminate in favor of blacks and Asian-Americans and women.”<sup>132</sup> At least one court has held that some quantum of evidence of discrimination for each group is sufficient; *Croson* does not require that each group included in the ordinance suffer equally from discrimination.<sup>133</sup> Therefore, remedies should be limited to those firms owned by the relevant minority groups as established by the evidence that have suffered actual harm in the market area.<sup>134</sup>

Next, the firm’s owner(s) must be disadvantaged. The DBE program’s rebuttable presumptions of social and economic disadvantage, including the requirement that the disadvantaged owner’s personal net worth not exceed its regulatory threshold and that the small business concern must meet the Small Business Administration’s size definitions for its industry, have been central to the courts’ holdings that it is narrowly tailored.<sup>135</sup> “[W]ealthy minority owners and wealthy minority-owned firms are excluded, and certification is available to persons who are not presumptively [socially] disadvantaged but can demonstrate actual social and economic disadvantage. Thus, race is made relevant in the program, but it is not a determinative factor.”<sup>136</sup> Further, anyone may challenge the disadvantaged status of any firm.<sup>137</sup>

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130. *Contractors Association of Eastern Pennsylvania v. City of Philadelphia*, 6 F.3d 990, 1007-1008 (3rd Cir. 1993) (“*Philadelphia II*”) (strict scrutiny requires data for each minority group; data was insufficient to include Hispanics, Asians or Pacific Islanders or Native Americans).

131. *Webster*, 51 F.Supp.2d at 1380–1381.

132. *Builders Association of Greater Chicago v. County of Cook*, 256 F.3d 642, 646 (7th Cir. 2001) (“*Cook II*”).

133. *Concrete Works IV*, 321 F.3d at 971 (Denver introduced evidence of bias against each group; that is sufficient).

134. *Rowe*, 615 F.3d at 233, 254 (“[T]he statute contemplates participation goals only for those groups shown to have suffered discrimination. As such, North Carolina’s statute differs from measures that have failed narrow tailoring for over-inclusiveness.”).

135. *Sherbrooke*, 345 F.3d at 973; see also *Grutter*, 539 U.S. at 341; *Adarand VII*, 228 F.3d at 1183-1184 (personal net worth limit is element of narrow tailoring); cf. *Associated General Contractors of Connecticut v. City of New Haven*, 791 F.Supp. 941, 948 (D. Conn. 1992), vacated on other grounds, 41 F.3d 62 (2nd Cir. 1992) (definition of “disadvantage” was vague and unrelated to goal).

136. *Sherbrooke*, 345 F.3d. at 973.

137. 49 C.F.R. §26.87.

**e. Evaluate the Burdens on Third Parties**

Failure to make “neutral” changes to contracting and procurement policies and procedures that disadvantage M/WBEs and other small businesses may result in a finding that the program unduly burdens non-M/WBEs.<sup>138</sup> However, “innocent” parties can be made to share some of the burden of the remedy for eradicating racial discrimination.<sup>139</sup> The burden of compliance need not be placed solely upon those firms directly responsible for the discrimination. The proper focus is whether the burden on third parties is “too intrusive” or “unacceptable”.

Burdens must be proven and cannot constitute mere speculation by a plaintiff.<sup>140</sup> “Implementation of the race-conscious contracting goals for which TEA-21 provides will inevitably result in bids submitted by non-DBE firms being rejected in favor of higher bids from DBEs. Although contract goals place a burden on non-DBE firms, this fact alone does not invalidate TEA-21. If it did, all affirmative action programs would be unconstitutional because of the burden upon non-minorities.”<sup>141</sup>

Narrow tailoring permits certified firms acting as prime contractors to count work they self-perform towards meeting contract goals provided that the study finds discriminatory barriers to prime contract opportunities. There is no requirement that a program be limited only to the subcontracting portions of contracts. The DBE program regulations provide this remedy for discrimination against DBEs seeking prime work,<sup>142</sup> and the regulations do not limit the application of the program to only subcontracts.<sup>143</sup> The trial court in upholding the Illinois DOT’s DBE program explicitly recognized that barriers to subcontracting opportunities affect the ability of DBEs also to compete for prime work on a fair basis.

This requirement that goals be applied to the value of the entire contract, not merely the subcontracted portion(s), is

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138. See *Engineering Contractors Assoc. of South Florida, Inc. v. Metropolitan Dade County*, 943 F. Supp. 1546, 1581-1582 (S.D. Fla. 1996) (“*Engineering Contractors I*”) (County chose not to change its procurement system).
139. *Concrete Works IV*, 321 F.3d at 973; *Wygant*, 476 U.S. at 280-281; *Adarand VII*, 228 F.3 at 1183 (“While there appears to be no serious burden on prime contractors, who are obviously compensated for any additional burden occasioned by the employment of DBE subcontractors, at the margin, some non-DBE subcontractors such as *Adarand* will be deprived of business opportunities”); cf. *Northern Contracting II*, at \*5 (“Plaintiff has presented little evidence that is [sic] has suffered anything more than minimal revenue losses due to the program.”).
140. *Rowe*, 615 F.3d at 254 (prime bidder had no need for additional employees to perform program compliance and need not subcontract work it can self-perform).
141. *Western States*, 407 F.3d at 995.
142. 49 C.F.R. § 26.53(g) (“In determining whether a DBE bidder/offeror for a prime contract has met the contractor goal, count the work the DBE has committed to perform with its own forces as well as the work that it has committed to be performed by DBE subcontractors and suppliers.”).
143. 49 C.F.R. § 26.45(a)(1).

not altered by the fact that prime contracts are, by law, awarded to the lowest bidder. While it is true that prime contracts are awarded in a race- and gender-neutral manner, the Regulations nevertheless mandate application of goals based on the value of the entire contract. Strong policy reasons support this approach. Although laws mandating award of prime contracts to the lowest bidder remove concerns regarding direct discrimination at the level of prime contracts, the indirect effects of discrimination may linger. The ability of DBEs to compete successfully for prime contracts may be indirectly affected by discrimination in the subcontracting market, or in the bonding and financing markets. Such discrimination is particularly burdensome in the construction industry, a highly competitive industry with tight profit margins, considerable hazards, and strict bonding and insurance requirements<sup>144</sup>

**f. Examine the Duration and Review of the Program**

Race-based programs must have durational limits. A race-based remedy must “not last longer than the discriminatory effects it is designed to eliminate.”<sup>145</sup> The unlimited duration and lack of review were factors in the court’s holding that the City of Chicago’s M/WBE construction program was no longer narrowly tailored; Chicago’s program was based on 14-year-old information, which while it supported the program adopted in 1990, no longer was sufficient standing alone to justify the City’s efforts in 2004.<sup>146</sup> How old is too old is not definitively answered<sup>147</sup> but governments would be wise to analyze data at least once every five or six years.

In contrast, the USDOT DBE program’s periodic view by Congress has been repeatedly held to provide durational limits.<sup>148</sup> Similarly, “two facts [were] particularly compelling in establishing that [North Carolina’s M/WBE pro-

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144. *Northern Contracting II*, 2005 U.S. Dist. LEXIS 19868 at 74.

145. *Adarand III*, 515 U.S. at 238.

146. *BAGC v. Chicago*, 298 F.Supp.2d at 739.

147. *See, e.g., Associated General Contractors of Ohio, Inc. v. Drabik*, 50 F.Supp.2d 741, 747, 750 (S.D. Ohio 1999) (“*Drabik I*”) (“A program of race-based benefits cannot be supported by evidence of discrimination which is now over twenty years old.... The state conceded that it had no additional evidence of discrimination against minority contractors, and admitted that during the nearly two decades the Act has been in effect, it has made no effort to determine whether there is a continuing need for a race-based remedy.”); *Brunet v. City of Columbus*, 1 F.3d 390, 409 (6th Cir. 1993), *cert. denied sub nom Brunet v. Tucker*, 510 U.S. 1164 (1994) (fourteen-year-old evidence of discrimination “too remote to support a compelling governmental interest.”).

148. *See Western States*, 407 F. 3d at 995.

gram] was narrowly tailored: the statute’s provisions (1) setting a specific expiration date and (2) requiring a new disparity study every five years.”<sup>149</sup>

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149. *Rowe*, 615 F.3d at 253.



# III. DALLAS FORT WORTH INTERNATIONAL AIRPORT'S BUSINESS DIVERSITY PROGRAMS

DFW has a long history of supporting and engaging disadvantaged, small, minority- and women-owned businesses. The Airport administers a number of substantive business diversity programs to promote competitive and fair contracting opportunities. DFW evaluates every contract in order to determine the best method to enhance participation toward achievement of designated aspirational and contract-specific goals and other program objectives.

DFW implements an M/WBE and a SBE program for its locally-funded contracts; a DBE program for federally-assisted contracts funded by the USDOT; and an ACDBE program for airport concession opportunities. This Chapter focuses on the contours of each program.

## A. DFW's Disadvantaged Business Enterprise Program

DFW's Airport Board administers a DBE program in accordance with 49 C.F.R. Part 26 ("Part 26"), Federal Aviation Administration ("FAA") mandates, and DFW's Airport Board oversight. The Airport Board receives federal financial assistance from the FAA. DFW's current DBE program was approved by the FAA in 2013 and contains all the required elements.

DFW's Airport Board ensures non-discrimination in the award and administration of USDOT-assisted contracts. Its DBE Program Policy ensures that DBEs, as defined in Part 26, have an equal opportunity to receive and participate in these contracts. The Airport Board distributes its *DBE Program Policy Statement* to DFW's Board of Directors and relevant departments.

DFW is a non-certifying member of the Texas Unified Certification Program ("TUCP"). The TUCP includes six certifying agencies that have executed a memorandum of agreement to perform DBE certifications for the State of Texas. The TUCP conducts "one stop shopping" certification for the USDOT DBE program and for the Airport Concession Disadvantaged Business Enterprise ("ACDBE") Pro-

gram.<sup>150</sup> DFW's Airport Board directs new applicants interested in being certified to apply to the North Central Texas Regional Certification Agency ("NCTRCA"), one of the six TUCP certifying entities.

To qualify for DBE certification, an applicant firm must demonstrate that it is a for-profit small business concern at least 51 percent owned and controlled by socially and economically disadvantaged individuals. Certification decisions are based upon the eligibility standards set forth in Part 26. DFW maintains a directory that includes certified firms for each of its business diversity programs.

As a recipient of FAA funds in excess of \$250,000.00, the Airport sets triennial DBE goals using the Part 26 two-step goal-setting process.<sup>151</sup> Before establishing a goal, DFW consults with minority organizations and chambers regarding the proposed goal. These consultations are designed to obtain information concerning opportunities for DBEs and the effectiveness of DFW's efforts to establish a level playing field for DBEs. DFW's overall DBE goal submissions include a summary of information and comments received during this public participation process and DFW's response to these comments.

For Federal Fiscal Years ("FFYs") 2017 through FFY 2019, DFW established an overall DBE goal of 28 percent using the NCTRCA certification database, the TUCP database, and the U.S. Census Bureau's calendar year 2014 *County Basic Patterns* data report.<sup>152</sup> After reviewing its original submission in light of its current FAA funded projects, DFW modified its goal from 28 percent to 21 percent for FFY 2018 and submitted its revision to the FAA for approval. DFW determined that this revision was necessary to reflect projected DBE opportunities.

The Vice President of the Business Diversity and Development Department ("BDDD") serves as DFW's DBE Liaison Officer ("DBELO"). The DBELO is responsible for implementing all aspects of the DBE program.<sup>153</sup> This includes, but is not limited to, identifying contracts and solicitations so that DBE goals are included in procurement documents and monitoring the results. The DBELO works with BDDD professional staff and consultants to ensure that DFW's DBE program is administered in conformance with Part 26.

BDDD is responsible for program administration. It examines bids and solicitations to ensure that DBEs are afforded an equal opportunity to participate in federally-

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150. The Texas UCP is comprised of six certifying entities that conducts DBE and ACDBE certifications.

151. The overall goal must be based on demonstrable evidence of the availability of ready, willing and able DBEs relative to all businesses ready, willing, and able to participate on USDOT contracts. The goal must reflect DFW's determination of the level of DBE participation it would expect absent the effects of discrimination. 49 C.F.R. § 26.45.

152. We recommend using the weighted availability estimates from this study to set future triennial and contract goals. See Chapter VII.

153. As required by Part 26, the DBELO reports directly to DFW's Chief Executive Officer.



funded airport construction projects, including, but not limited to, reviewing the scope of work, bonding, insurance, and retainage.

In conformance with Part 26, prompt payment and release of retainage obligations are set forth in FAA assisted contracts.<sup>154</sup> Prime contractors must pay subcontractors within seven days from receipt of payment one. The clause also provides for prompt and full payment of retainage from the prime contractor to the subcontractor within seven days after the subcontractor's work is satisfactorily completed.<sup>155</sup> All forms of USDOT agreements (e.g. truck leasing agreements, task orders) are covered by the prompt payment requirement. DFW uses appropriate means to enforce these requirements. A finding of non-payment constitutes a material breach of contract.

BDDD sets DBE contract-specific goals in detailed *Advertisements and Invitations to Bid*. DFW considers the scope of work, the location of the work, and the availability of DBEs to perform the particular type of work in setting contract goals.<sup>156</sup> DFW will not count participation under a DBE subcontract toward a contractor's final compliance with its DBE obligations on a contract until the amount being counted has actually been paid to the DBE.

The bidder/offeror *Schedule of DBE Participation* is required as a matter of responsiveness. The bidder/offeror must meet the DBE contract goal or document adequate good faith efforts ("GFEs") to do so. GFEs are efforts that bidders are reasonably expected to meet to produce a level of participation sufficient to meet the contract goal. DFW follows the GFE guidance set forth in Appendix A of Part 26 as its reference and guide for evaluating all GFEs.<sup>157</sup>

Depending on the project type, the Airport Development and Engineering ("ADE") Department or Procurement and Materials Management ("PMM") assume responsibility for determining whether a bidder/offeror has submitted the required DBE documentation to be deemed responsive. BDDD determines whether a bidder/offeror who has not met the DBE contract goal has documented sufficient GFEs to be regarded as responsive.

Within five days of being informed by the Airport Board that it has not documented sufficient GFEs, the non-responsive bidder/offeror may request administrative reconsideration by writing to the Executive Vice President of

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154. These clauses are both a Part 26 requirement and a contractual requirement.

155. DFW's Airport Board will consider a subcontractor's work as satisfactorily completed when all tasks called for in the subcontract have been effectuated and documented.

156. To ensure a narrowly tailored program, Part 26 does not require that a recipient set a goal on every FAA assisted contract. Part 26, §26.51(e)(2) states that a recipient is not required to set each contract goal at the same percentage level of the overall goal. The goal for a specific contract may be higher or lower than that percentage level of the overall goal.

157. Appendix A contains a list of types of actions which are considered part of a contractor's GFE. However, the list is not intended to be exclusive, since GFE determinations are inherently fact-specific.

Administration and Diversity.<sup>158</sup> The bidder/offeror will be afforded the opportunity to provide written documentation and arguments concerning the question whether it met the goal or made adequate efforts to do so. DFW will subsequently issue a written disposition explaining the basis for finding that the firm did not meet the goal or document adequate GFEs. The disposition is administratively final and is not appealable to the USDOT. Contractors must document GFEs before contract award and through the life of the contract. DBEs serving as the prime vendor must meet contract goals and document their GFEs just like any other contractor if their self-performance falls short of the contract goals. DBEs may count toward goals the work they perform with their own forces, as well as work performed by other DBE subcontractors and suppliers.

Prime contractors must make GFEs to replace a DBE that is terminated or that has otherwise failed to complete its work on a contract with another DBE, to the extent required to meet the contract goal. The prime contractor must obtain prior written administrative approval of the substitute DBE and provide copies of new or amended subcontracts or document GFEs to obtain a DBE replacement contractor.

DFW uses a *Project Site Review* document to conduct commercially useful function (“CUF”) reviews.<sup>159</sup> This document lists questions concerning the scope of work, management, work performance, and on-site equipment to determine whether the DBE is an independent business performing a CUF by performing, managing, and supervising the work specified in its contract.

Prime contractors must maintain records and documents of payments to DBEs for three years following contract performance. Records must be available for inspection. The Airport performs interim audits of contract to review payments to DBE subcontractors to ensure that the actual amount paid to DBE subcontractors equals or exceeds the dollar amounts stated in the commitment. DFW uses the B2Gnow electronic data collection and monitoring system to track payments.

DFW employs a variety of outreach, training opportunities, and financial/technical assistance for DBEs. It provides industry-specific outreach as, well as meet-and-greet sessions. DFW also partners with community organizations that assist with its efforts to build an airport that reflects the communities and customers it serves.

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158. In conformance with Part 26, the reconsideration official will not have played any role in the original determination that the bidder/offeror did not document adequate GFEs.

159. Commercially useful function is defined in 49 C.F.R. § 26.55 (c)(1) as a discrete set or group of tasks, the responsibility for performance of which is discharged by the DBE by using its own forces or by actively supervising on-site the execution of the tasks by entity for whose work the DBE is responsible. Without limiting the generality of the foregoing, a DBE is considered not to be performing a commercially adaptable function if it subcontracts to non-DBE more than 50 percent of a contract being counted towards the applicable DBE participation goal.

## **B. DFW's Airport Concessions Disadvantaged Business Enterprise Program**

Since DFW operates as a large hub primary airport, it is required to establish an Airport Concession Disadvantaged Business Enterprise ("ACDBE") program in accordance with 49 C.F.R. Part 23 ("Part 23"). DFW's revised ACDBE Program and Policy was approved by the Federal Aviation Administration ("FAA") in 2013. It is the policy of DFW to ensure non-discrimination in the award and administration of opportunities for concessions by airports receiving USDOT financial assistance.

BDDD is responsible for ensuring that DFW complies with designated ACDBE policies and procedures. The Vice President of BDDD is the Airport Concession Disadvantaged Business Enterprise Liaison Officer ("ACDBELO"). The ACDBELO is responsible for implementing all aspects of DFW's ACDBE program and for ensuring that DFW complies with all provisions of Part 23, including reviewing submissions, GFE determinations, and other program elements. The ACDBELO's responsibilities include the following:

- Gathering and reporting statistical data and other information as required by the FAA or USDOT.
- Reviewing third party contracts for compliance with the ACDBE program.
- Working with all departments to set overall ACDBE goals.
- Ensuring that bid notices and requests for proposals are available to ACDBEs in a timely manner.
- Identifying contracts so that ACDBE goals are included in solicitations (both race-neutral methods and contract-specific goals).
- Analyzing the Airport Board's progress toward goal attainment and identifying ways to improve progress.
- Participating in pre-proposal meetings.
- Advising the Chief Executive Officer and ACDBE matters and achievements.
- Providing ACDBEs with information and technical assistance.
- Planning and participating in ACDBE training seminars.
- Acting as liaison officer to the Texas Unified Certification Program.
- Providing outreach to ACDBEs and community organizations to advise them of opportunities.

To be certified as an ACDBE, an applicant firm must meet the Part 26 eligibility standards as well as the following Part 23 business size requirements:

- Concessionaire/goods or service provider: Three-year averaged gross receipts under \$56.42 million
- Banks and financial institutions: Assets under \$1 billion
- Car rental companies: Three-year gross averaged gross receipts under \$75.23 million
- Pay telephone companies: 1,500 employees or fewer
- Automobile dealers: 350 employees or fewer.

As with the DBE program, DFW accepts the certification of the TUCP, and applicants are directed to NCTRCA. The TUCP Directory indicates whether a firm is certified as an ACDBE, DBE, or both.

For federal fiscal years October 1, 2017 through September 30, 2020, DFW has established the following ACDBE goals:

- Non-Car Rental concession contracts: 33 percent, of which 31 percent will be met through race-conscious contract goals and 2.13 percent through race-neutral means; and
- Car Rentals concession contracts: One percent, of which one percent will be met through race-conscious contract goals and zero percent through race-neutral means.<sup>160</sup>

DFW's concessionaires must comply with all applicable provisions of DFW's *ACDBE Policy and Procedures Manual* and its *Special Contract Provisions*. They must maintain records to ensure goal attainment. Failure to comply with prescribed policies constitutes a material breach of a lease and cause for termination.

Again, similar to the DBE program, to be awarded a contract that carries a concession specific goal, a contractor must make GFEs to meet the goal, as a matter of responsiveness. DFW evaluates GFEs using the guidance set forth in Appendix A of Part 26. BDDD's Vice President is responsible for determining whether a concessionaire who has not met the concession specific goal has documented sufficient GFEs to be regarded as responsive. A concessionaire must make GFEs to replace an ACDBE that is terminated or has otherwise failed to perform with another certified ACDBE, to the extent necessary to meet the contract goal. Concessionaires have a continuing obligation to meet ACDBE/DBE participation commitments. If amendments or other modifications are required, the concessionaire must immediately inform BDDD in writing of such changes.

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160. Concession opportunities anticipated during the goal period are: general operational needs for rental car agencies to operate (i.e. windshield repair, automotive repair, office supplies, fuel, office equipment, uniforms and safety equipment).

## C. DFW's Minority and Women Business Enterprise Program

DFW's most recent M/WBE program for its locally-funded contracts is contained in the 2012 M/WBE *Policy Statement* and is based upon the Airport's 2010 Availability and Disparity Study. The M/WBE Program seeks to level the playing field and foster participation in construction, architectural and engineering professional services, and non-professional services. To implement this Policy, DFW has developed its *Minority Business Enterprise and Minority/Women Business Enterprise Policy and Procedures* handbook.

BDDD is responsible for the establishment, implementation, coordination, and monitoring of the M/WBE Program. The Vice President reports directly to the Executive Vice President of Administration and Diversity and has direct unrestricted access to the Airport Board's Chief Executive Officer

BDDD conducts the following administrative procedures in support of the M/WBE program:

- Developing and maintaining systematic procedures to ensure that M/WBEs are able to compete on all airport and commercial development contracts.
- Assisting all DFW departments with the implementation of the M/WBE process.
- Developing listings of M/WBEs for prime and subcontracting opportunities.
- Contract-specific goal setting.
- Certification standards and procedures.
- Reviewing and verifying the certification of M/WBEs.
- Reviewing bids and solicitations.
- Encouraging and promoting joint ventures, partnering, and teaming between small businesses and M/WBEs.
- Graduation standards.
- Determining commercially useful functions for M/WBEs participating in procurements.
- Determining good faith efforts.
- Counting participation of MBEs and WBEs.
- Monitoring and reporting.
- Prompt payment and retainage.

- Preparing and presenting periodic reports to DFW's Board of Directors.
- Promoting and conducting outreach.
- Enforcing violation remedies.

BDDD may adjust annual goals upon review by the Executive Vice President of Administration and Diversity to ensure they are based on strong evidence. The goal must be based on the total dollars spent annually for construction and construction-related professional services contracts and the availability of MBEs and WBEs to perform these contracts.

## **1. Eligibility Requirements for the M/WBE Program**

DFW provides stringent criteria for participation in the M/WBE Program. In order for its participation to be counted toward a contract-specific goal, the MBE or WBE must be certified at the time of bid/proposal submission by the North Central Texas Regional Certification Agency, the Dallas Fort Worth Minority Supplier Council, the Women's Business Council Southwest, the State of Texas Small Business Enterprise Program, the Texas Unified Certification Program, or the Small Business Administration's 8(a) Certification Program.

A Minority Business Enterprise ("MBE") is defined as a "for-profit" independent business concern at least 51 percent owned and controlled by one or more U.S. citizen(s) or lawfully-admitted permanent resident(s) that are members of the following groups: Black Americans, Hispanic Americans, Asian Pacific Americans, Subcontinent Asian Americans, or Native Americans. A Women Business Enterprise ("WBE") is defined as a "for-profit" independent business concern at least 51 percent owned and controlled by one or more U.S. citizen(s) or lawfully-admitted permanent resident(s) who is female.

Qualifying firms must establish a place of business within DFW's market area at the time the firm is submitted for credit toward a contract goal. This area is the North Texas Commission twelve county area of Dallas, Tarrant, Collin, Delta, Denton, Ellis, Hunt, Johnson, Kaufman, Parker, Rockwall, and Wise counties.

The firm's owner must possess the requisite training and expertise to perform the main functions of the firm and, where required, have a license or certification issued in his or her name. A firm receives certification in the appropriate North American Industry Classification System ("NAICS") code(s) for its work type(s) or industry. As firms grow and expand, they are afforded the opportunity to request additional NAICS codes. DFW maintains a current directory of MBEs and WBEs. Bidders are required to use the directory to assist them in locating qualifying firms for the work required on the contract.

## **2. Administration of the M/WBE Program**

### **a. Setting M/WBE goals**

Since the 2010 Disparity Study failed to find sufficient evidence of discrimination against White females in DFW's construction market, they are not included in remedial goals for construction in the M/WBE Program. Contract goals on construction contracts are set for only racial and ethnic minorities. For each fiscal year, BDDD may establish an annual aspirational percentage for overall MBE prime and subcontract participation on construction contracts and overall M/WBE participation on Construction-related Professional Services Contracts (Architectural and Engineering). The aspirational goal is adjusted by BDDD on an annual basis based upon the most accurate availability data available.

The procurement of goods and services are subject to different guidelines based upon the industry value of the purchase and the circumstances under which a procurement is made. BDDD evaluates each locally funded contract to determine the best method to enhance M/WBE participation to be counted towards the achievement of annual SBE or M/WBE goals and other program objectives.

BDDD reviews each bid or proposal for suitability for setting contract goals. The contract goal is not intended to function as a quota or set-aside. Relevant factors include business capacity, business availability, nature of the contract, past experience with M/WBE participation on similar contracts, price competitiveness, and subcontracting opportunities. There must be at least three available MBEs or WBEs in the anticipated subcontractable scopes of work and that are located in DFW's market area.

Only certified firms are counted towards the satisfaction of M/WBE goals. If a prime contractor wishes to use a firm that has not been certified, DFW will assist the applicant in expediting this process. A list of all M/WBEs to be used as subcontractors is required at the time of bid proposal/solicitation.

For contracts with an estimated value between \$3,000.00 and \$50,000.00, bids or quotes must be solicited from two firms certified as Historically Underutilized Businesses ("HUBs") by the State of Texas. Contractors must also contact and solicit bids from at least two Small Business Enterprises ("SBEs") and/or M/WBEs.

For contracts with an estimated value greater than \$50,000.00, the Procurement and Materials Management ("PMM") Department, collaborating with BDDD, reviews all requests to establish goals. DFW also requires that PMM contact two SBEs to make them aware of the opportunity.

Based on the 2010 Disparity Study, the Airport established a program to set contract goals on construction contracts for only racial and ethnic minorities; the Study failed to find sufficient evidence of discrimination against White females to recommend including them in remedial goals. For each fiscal year, BDDD may establish an annual aspirational percentage for overall MBE prime and subcontract participation on construction contracts. The aspirational goal is adjusted by BDDD on an annual basis based upon the most accurate availability data available.

BDDD sets goals on a contract-by-contract basis to reflect the relative availability of M/WBEs to perform commercially useful functions. M/WBE prime contractors may count 100 percent of their self-performance. DFW uses the provisions in 49 C.F.R. § 26.55 for counting purposes.

For each fiscal year, BDDD establishes an annual aspirational percentage goal for overall M/WBE participation on architectural and engineering (“A & E”) contracts based on the most accurate and reliable data available to DFW at that time. BDDD also establishes goals on a contract-by-contract basis. Factors considered include the relative availability of these firms to perform a commercially useful function on the specific contract. All certified M/WBEs are eligible to be counted towards credit for meeting a goal on A & E contracts.

**b. Meeting M/WBE Program Requirements**

Contractors are encouraged to attend *How to Do Business with the Airport* seminars, as well as industry-specific outreach meetings and pre-bid/pre-proposal meetings.

The specific goal for a contract is stated in the *Advertisement and Invitation for Bid* and is established by DFW’s policies. A signed and executed form for each MBE or WBE subcontractor must be submitted at the time of bid or proposal submission as a matter of responsiveness. For contracts involving alternative delivery methods (*e.g.*, Design-Build or Construction Management-at-Risk), BDDD may determine the requirements to address the goal by means of a compliance plan, or alternative demonstration of GFEs.

Submission of the *Intent to Perform as a Subcontractor* form for each M/WBE firm constitutes a representation by the contractor to the Airport Board that it believes such M/WBE to be certified as such and that it has a place of business in DFW’s market area. If the M/WBE subcontractor information or status change after the forms have been submitted but prior to contract award, the contractor must immediately notify BDDD of the changes and provide a written explanation by submitting a *Request for Approval of Change to Final Schedule of Subcontractors* form. The *Final Schedule of Subcontractors* must be submitted within three business days



from the date of bid opening or with the bid verification. This form must list all subcontractors on the project and detail the preliminary percentage and dollar commitment of the contractor to M/WBE participation.

A contractor must either meet the contract goal or demonstrate its good faith efforts (“GFEs”) to do so. BDDD will consider only those documented efforts that occurred prior to the GFE submission. If the contractor fails to submit GFE documentation with the bid or proposal, it waives the right to appeal the GFE disposition. If a bid/proposal subject to a contract-specific goal does not meet the goal or document an adequate GFE, BDDD shall notify the procuring department to regard the bid/proposal as non-responsive.

To assist with the GFE determination, designated program staff use a *Good Faith Effort Analysis Worksheet*. Contractors must make GFEs in conformance with the DBE program regulations.<sup>161</sup> The contractor must document that it took all necessary and reasonable steps to achieve the prescribed goal which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient participation, even if the end result was unsuccessful. DFW evaluates the quantity and quality of the GFEs. The efforts taken by the bidder or proposer should be those that one might actively and aggressively employ to obtain sufficient participation. Efforts that are merely pro forma such as mailings to MBEs or WBEs requesting bids are not GFEs, even if they appear to be sincerely motivated. A contractor’s promises to use additional firms after contract award are not considered to be responsive to the solicitation or to constitute GFEs.

If the contractor meets the contract-specific goal or documents an adequate GFE, BDDD notifies the procuring department that its bid/proposal is responsive. If BDDD finds the bid/proposal non-responsive, the bidder/proposer may appeal using the Airport’s appeal process.

The contractor has a continuing obligation as a covenant of performance to meet the utilization goal to which it committed at contract award, inclusive of change orders, amendments, and modifications. If the contractor during contract performance must replace a firm for any reason, it is obliged to follow DFW’s provisions governing substitution and to document GFEs to meet its original contractual commitment.

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161. 49 C.F.R. Part 26 Appendix A. GFEs include, but are not limited to: whether the contractor negotiated in good faith with interested M/WBEs regarding price, using good business judgment and not rejecting reasonable quotes from interested M/WBEs; whether the contractor selected portions of the work to be performed by M/WBEs; and whether the contractor provided written notice via mail or facsimile no fewer than five business days before the bid or proposal is due to a reasonable number of M/WBEs. However, the list is illustrative, not exclusive. It is not intended to serve as a mandatory checklist. All GFE efforts determinations are intrinsically fact-specific. The DFW worksheet provides room for reviewers to evaluate each of the factor

All invoices in compliance with contract payment terms and conditions are to be paid within 30 days of receipt. All covered contractors must comply with the Texas Prompt Payment Act.<sup>162</sup> BDDD works with user departments to ensure prompt payment and compliance with contract goals and commitments.

An important part of the compliance review process is a determination whether the certified firm is performing a commercially useful function (“CUF”). A firm performs a CUF when it is responsible for a discrete task or sequence of tasks using its own forces or by proactively supervising on-site execution of tasks. A given firm must be certified in the North American Industry Classification System (“NAICS”) code (s) in order for the prime contractor to receive credit towards meeting the applicable goal. To ascertain whether a firm is performing a CUF, DFW examines factors, including, but not limited to, (1) whether the firm has the requisite skill and expertise to perform the work for which it is being employed and possesses all necessary licenses; (2) whether the firm is in the business of performing, managing, or supervising the work for which it has been certified and is being utilized and possesses all required licenses; and (3) whether it is performing a real and actual service that is a distinct and verifiable element of the work called for in the contract. Work that a certified firm subcontracts to a non-certified firm does not count for DBE credit.

A CUF audit is performed to determine the appropriate credit for work performed by the MWSBE to prevent fraud and to ensure program integrity. DFW uses a CUF Worksheet that requires reviewers to answer specific questions.

DFW’s Audit Services Department provides audit assistance, as necessary, to determine compliance with M/WBE business processes. It assesses and makes recommendations when requested on the utilization of M/WBEs, including but not limited to, allegations of fraud.

Failure to meet M/WBE contractual commitments or any other aspect of program requirements constitutes a material breach of contract and entitles the Airport to exercise contract remedies, program requirements, or applicable law.

**c. Capacity Building, Training and Outreach Activities**

A major objective of DFW’s programs is to build the capacity of certified firms. DFW offers a robust litany of programs that provide training and outreach for M/WBEs. Subjects include joint venture agreements, the procurement process, DFW audits, succession planning and business valuation

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162. Tx Gov’t Code, Ch. 2251.

solutions. Events include networking sessions, luncheons, informational meetings, and pre-bid conferences.

Race- and gender-neutral measures include:

- Meet-and-Greet Program: These sessions offer an introduction to DFW goods and services.
- LiftFund: DFW has partnered with LiftFund and National Insurance Consultants to offer a Technical Assistance/Loan Pilot Program which provides instruction, training, technical assistance, and support services to M/WBEs currently doing business with DFW. DFW has also partnered with LiftFund to offer workshops on capital options and business loans.
- Rolling Owner Controlled Insurance Program: DFW's Rolling Owner Controlled Insurance Program provides safety management, site control, insurance cost savings, and the ability to mitigate losses for contractors. The "rolling" feature allows DFW to apply coverage to multiple and sizeable construction projects.
- Mentor Protégé Program: The Capacity Building Alliance Program serves as a volunteer mentor protégé program for DFW's Terminal Renewal and Improvement Program ("TRIP"). This program provides select contractors with one-on-one technical training and resources. The program focuses on bidding and estimating; effective project management; leadership skills; peer partnerships; safety and security; submitting invoices to DFW; and surety support.
- Minority Chamber/Advocacy Organization Partnerships: These relationships are designed to increase the success of DFW's community outreach program.
- Capital Assistance and Bonding Program: This program offers workshops on business planning and management; banking, finance and access to capital; and principles of accounting and financial statements.
- Champions of Diversity Awards honor companies that partner with DFW and go above and beyond in advancing diversity and inclusion.

## **D. DFW's Small Business Enterprise Program**

In addition to the M/WBE Program, BDDD administers a Small Business Enterprise ("SBE") Program<sup>163</sup> for locally funded construction contracts under \$1 million and for professional and non-professional services. DFW added the SBE Program to its

existing programs in 2012 based upon the 2010 supplement to the disparity study, which failed to find sufficient evidence of discrimination to support a race- and gender-conscious program for these types of contracts.

An SBE is a small business concern as defined in the Small Business Administration regulations<sup>164</sup> that also does not exceed the cap on average annual gross receipts specified in the DBE program.<sup>165</sup> Only firms certified at the time of bid/proposal by an agency recognized by DFW are eligible for participation in the SBE program.<sup>166</sup> The firm must maintain its principal place of business in DFW's relevant market area.<sup>167</sup> BDDD maintains listings of certified SBEs by industry codes. These listings are used to notify SBEs of business opportunities and assist vendors to satisfy SBE requirements.

Regardless of certification by a recognized agency, the SBE must be an independent business and cannot be an affiliate of a large business. An independent business is one whose viability does not depend on its relationship with another firm. Recognition of an applicant as a separate entity for tax or corporate purposes is not necessarily sufficient to evince that the firm is independent and non-affiliated. DFW has the sole discretion to determine eligibility.

Bidders must submit a properly completed SBE certificate or letter, with all required attachments, for all SBEs proposed to be used as subcontractors or suppliers to meet contract-specific goals at the time of bid/proposal submission. A firm must be certified as an SBE at the time of bid or proposal submission to be counted towards meeting the goal for purposes of determining contract award. Post award, a contractor is able to count SBEs certified during the performance of the contract towards its SBE contractual commitment once documentation concerning such certification is submitted to BDDD. When an SBE participates on a contract, the contractor must count only the value of the work actually performed by the SBE towards the contract-specific goal.

BDDD reviews each eligible bid or proposal to determine whether to set a contract-specific goal using the same criteria as for the other programs. The Airport likewise applies the same GFEs, CUF, counting and other standards and processes as with the M/WBE program.

DFW offers a wide range of technical assistance and business development resources to SBEs, including capital assistance; bonding assistance and support

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163. Small Business Enterprise Policy and Procedures Manual.

164. 134 C.F.R Part 121.

165. 49 C.F.R. §26.65(b).

166. Eligible certification programs include the U.S. Small Business Administration's 8(a) Program; the State of Texas Small Business Enterprise Program; and other programs recognized on a case-by-case basis at DFW's discretion.

167. The market area is the North Texas Commission 12-county area, including Dallas, Tarrant, Collin, Delta, Denton, Ellis, Hunt, Johnson, Kaufman, Parker, Rockwall, and Wise Counties.

resources; and guidance with general administrative issues, personnel management, invoicing, preparation of business plans, change orders and project budgets.

The SBE program includes the following outreach and race-neutral initiatives:

- SBE Legal Services Initiative: DFW is partnering with local bar associations to promote the growth of SBE certified law firms practicing in aviation-related industries.
- Technical and Business Development Resources: The Airport offers a wide range of technical assistance and business development resources to small businesses, including capital assistance, bonding assistance and support resources which provide guidance with general administrative, personnel management, invoicing, preparation of business plans, change orders and project budgets.
- Subcontractor Mobilization Payments: To account for preparatory work necessary to the movement of subcontractor personnel, equipment, supplies, and incidentals to the project site and for all other work and operations that must be performed, prime contractors are required to make a mobilization payment to each subcontractor as determined by DFW.

## **E. Experiences with DFW's DBE, M/WBE and SBE Programs**

To explore the impacts of race- and gender-neutral contracting policies and procedures and the implementation of DFW's DBE, M/WBE and SBE programs, we interviewed 154 individuals about their experiences and solicited their suggestions for changes. The following are summaries of the topics discussed. Quotations are indented and have been edited for readability. They are representative of the views expressed during the group interviews.

### **1. Obtaining Work on Airport Projects**

D/M/WBEs in general reported that the programs work well and that the Airport and BDDD are committed to inclusion and diversity.

Of all the programs I participated in, I think DFW is doing a pretty respectable job at trying to make sure that there is inclusion.

There's a structure in place that makes it very easy for the airport to achieve their goals and exceed them.

Of all the agencies in [the] DFW [area], I would say DFW probably has the most structured and most effective program in place than any other agency. Partly it's because they have unquestionable support from the Board of Directors, from the top.... As a result, they have the ability to develop mechanisms in the procurement process that really require contractors to commit to the goal as part of being allowed to go through the process of procurement.... The other thing is, is that they also commit with money to the organizations that are in this room. I think they have shown a commitment to spend money, to have partnerships with groups like us, so then they could access those organizations to communicate these opportunities to everybody that's in the industry that would help facilitate those goals.

DFW does a really great job of promoting, or looking like they're promoting the minority businesses, because they have the diversity classes. You can come here and you can have all different kinds of classes on how to make a proposal, how to do pricing. How to do this system... they're really great people, and they do great classes, and they seem very engaged and want you to succeed.

Every single contractor that wants to do work at the Airport has an incentive to achieve the goal. The good faith effort is there, but they're very strict about how you respond to that good faith effort. Most agencies, there's a good faith effort and there's a lot of wiggle room where you say, "Yeah, I really tried to make the effort, but this is what we came up with." Then the agency usually is, "Okay, we're good." At DFW, like, "Mm-hmm (negative). You have these steps. We want to see the backup data that shows you went through these steps. Then we'll let you know if we think that that's acceptable," so that's huge.

Ensuring continuity of program operations and commitment to the programs was mentioned as a concern by some participants.

BDDD, what they have to do is they have to have a centralized plan so that if somebody leaves, the person coming in has to follow that same process, so that it does not impact [the [program]], because what a lot of people don't realize is the Airport does not have a large staff.... Everybody else is consultant. Because of that, you don't have a lot of DFW employees really running things ... [and] [the outside consultants] don't know nothing about the Airport's program

and how to support that program.... They need to put together something that's standardized, something that can roll over to anybody coming in.... There's 22 departments at the Airport. Each one of them should be trained quarterly or whatever, updated on what's going on as far as with the MBE program.

They offer all these great classes, but then it feels like they just sort of leave you there.

Contract goals were reported to be essential to minority- and women-owned firms' ability to obtain work on DFW contracts and associated subcontracts.

Goals are crucial.

Goals are important because there's still issues and barriers that we're dealing with, even having the goals in place as they stand, so taking those away I don't think would do any justice to the smaller firms.

As a result [of contract goals], [M/WBEs have] gotten work, they've grown their capacity, and as a result, now their doing work with other primes on the private side because of the demand.

Without the goals initially, you don't even get the opportunity to build a relationship, to say that you can call me to do work, whether you have goals or not.... The goals are important to at least get us in there. Because we get calls that say, "We're calling you because we have to."... Once we're in there then we're good, but we can't even get in there without the goals.

## **2. Access to Information**

Participants generally lauded the Small Business Diversity and Development Department. D/M/WBEs felt that they were able to access information through this department.

[BDDD is] very friendly in the way that if you ask for something, they'll get it done. So, we asked for a debrief, they were ready for us, gave us the appointment, they were not hesitant to open up and tell us what exactly we missed. So, that really helped a lot.

### **3. Technical Assistance and Supportive Services**

More targeted and detailed help with navigating the Airport's processes and requirements was suggested by many attendees.

They've done capacity building where, how to do business with DFW, but it's very 30,000 foot high training. It's not really drilling into, "Okay, with this process, here are some of the challenges and some of the boxes that the small firms are presented with and how to overcome those." They'd say, "Okay, you need to fill out these forms. You have to do this. You have to have these certifications. You need a prime, get on their team." I mean, that's a given. They really never drill into the challenges that exist and how firms could overcome those challenges [such as legacy relationships and paperwork burdens].

There needs to be a process to help firms that may not be as mature as a multi-national firm or have the complexity of having three or four different CPAs and accountants and CFOs and finance people on their staff to help them navigate the Airport's financial processes because those can be very onerous and very difficult for small businesses.

Access to capital was a major impediment to doing any public work. The size of DFW jobs increases the challenge.

We [as the prime contractor] end up doing early pay out of our pocket just to get people involved. At the Airport if they could realize or recognize that and contribute somehow, I'm not saying financially, but certainly in loans or landing or something to the minorities, it saves us having to do that. That's the only way we can get participation.... The Airport does do classes on how to work at the Airport, but that doesn't alleviate the fact that you still need the financial [resources].

### **4. Contracting Processes and Requirements**

Airport projects are often very large and complex. This was reported to be a disincentive to small firms to seek Airport contracts. Unbundling projects, providing longer lead times and simplifying requirements would assist these businesses to take on some Airport work. More attention to reducing barriers to small firms was recommended by many interview participants.

They need to divide these contracts into smaller contracts, maybe, and test the small firms that they have ... and give them



the chance to prove their expertise, because now even as a sub, with one consultant, I'm not even getting the expertise there. I'm getting inspectors. I'm getting construction admin, whatever, contract admin. And really, they don't make me qualified next time, even if the chance will come, they will not make me qualified to go after those as a prime. Something has to be done. If you have subconsultants under you, please give them the chance to grow and become one day qualified to go after small contracts.

There's no incentive, motivation, to help bring those small firms up, get their skillsets improved or their qualifications.

We have contractors that will not bid DFW work because of how difficult it is to work for DFW.

If they had a program where they had on call [contract]s for disciplines that they needed, because right now what they do, is they package everything under a prime architect or a prime engineer.... It adds 40 percent to the price, or more, because then the prime, because they're terrified that we're going to take their work away from them, and it's not even their work, it's our work, but they have to get in there and put their thumb on it, and they've put their mark on it and keep control of us. We can't have any meetings without them, and I've had the clients say, gosh, I feel so constrained by this. I wish we could have a contract with you directly.... DFW could look at the disciplines that they use most, and have an on call [contract], and it wouldn't have to be one, it could be a couple that they could choose from

[The Airport should] put their money where their mouth is and say we are going to split up [projects].

Insurance requirements were another barrier to the ability of small firms to submit bids or proposals.

The insurance has changed so much on all the requirements for the airport that there's only a handful of people that can bid.

## **5. Payments**

Complaints about slow payments came from all types of firms. This seemed to be a universal concern, mostly unrelated to race or gender.

It ought to be some kind of process where when they get a payout in, they stamp it, it's got five days to sit on somebody's desk for them to do their job, to get to the next person so they can do their job.

The issue is particularly acute for subcontractors at lower tiers of performance (that is, subcontractors to subcontractors).

Your third tiers are technically out cash flow for about three months. Second tiers it's about two months.

The problem that we've found on a lot of the stuff is a lot of your smaller second tier or even third tier minority firms did not want to bid. They did not want to participate out here because the length of payment.

[M/WBEs] are saying I can't afford [to wait months for payment as a lower tier subcontractor.... [If] the first tiers to get paid early, then that's an incentive to get everybody to help get the minorities, that's what it was designed for was to help the minorities get them involved.

Change orders and delays during contract performance were especially problematic.

We got 15 change orders that's already hit that project. There's not one been processed. But yeah, they're still holding us to liquidated damages, \$12,000 a day, \$17,000 a day. How can a small business absorb \$17,000 a day, when you've got 15 change orders that ... you give them one behind the other, and you don't even have time to process them? The estimator can't even estimate 'em as fast as they're putting them out.

So, [by contracting delays] we're all impacted, but the dates don't change. The attitudes don't change. The contract administrator comes to the meeting, "Nobody's getting paid because I don't have three pictures."

## **6. Meeting Contract Goals**

Although not always easy, most prime vendors reported they have been able to meet DFW's MBE, DBE and SBE goals.

All of our contracts, we've met goals. There may have been one or two we were a couple percentage points, a little low from 35 percent prime.

Some of the things DFW's done right is every single contract doesn't have to be 35 [percent] but the end whole enchilada has to be 35 [percent].

Many prime vendors felt that the contract goals were often too high and placed them at uncompensated risk.

Why do they make their goals so high? Why is it 35 percent? TxDOT is nowhere close to that.

They don't have the ten million dollar umbrella but that doesn't stop them from faxing you a quote at 1:30 that's incorrect. You put them on your intent to award and you submit as we're using these guys and then three days later after you've been low, you realize that they need 30,000 dollars more to get the right insurance. These things happen on every bid. Or the [general contractor] pays the price to eat it to keep the goal. What I think when you do the 30, 35 percent goals is you promote people or you force people to get in over their head where we as a contractor would say you've done, you've got a big history of 100,000 dollar jobs, this is a million dollar scope but it's 35 percent, we have no choice but to use x. Then you have a minority sub who is happy to get the biggest job they've ever done and which you don't realize it's three months down the road when they can't handle that size of a job and you've put them at risk and now you're at extreme risk. The high percentages I think actually backfire and I think if you lower the percentage, I think everybody would be happier.

If you lower the percentage you have more opportunities for smaller guys, new guys because you're not handcuffed.

The good faith efforts process was reported to be so cumbersome and the timing so tight that it is not a realistic option to reduce risk.

The prime contractor is taking the risk because they're kind of forced, their hand is forced to say look, you now have a goal and the goal is just as important as performing the work. You have to take the risk to meet the goal because the good faith effort is not a process that's effective during the job. If you're already at bid day, you're too late to go down the road of a good faith effort. You as the prime are now stuck with for me to meet the goal, I have to go take a bid or even consider taking a bid from somebody I've never worked with, though they may be qualified as a DBE, you have no past performance and you can't get any past performance from them.

I would definitely back up what [name] said on the good faith effort. I've personally seen four or five people that were low immediately disqualified for, you either meet it or you don't. You either get the job and meet it or you do not get the job because you didn't meet it.

A representative from a large, national firm offered a different view.

I'm hearing is there's a lot more risk using an MWBE firm, which in my opinion, I disagree with. I think there's opportunities that the MWBE firms have and they don't have the experience in because they haven't had the exposure. But you always go back to the chicken before the egg. You've got to have experience to do this type of job but you never get the opportunity to do this type of job because you don't have that experience.

Finding qualified certified firms is often challenging for prime contractors and consultants, and may cost the prime contractor money.

The timing is not consistent from a good faith effort. The depth of subcontractors and the resources to say hey, these subs can do this work is not an effective tool right now that is provided to you. Unless you're willing to invest on the front end to do the outreach and then just put everybody in a basket and say maybe I'll call you one day, for the private development side it does not work effectively.

We've had to reimburse the sub for the extra insurance many a times. Nobody reimburses us.

Some large firms expressed frustration that minority- and women-owned businesses do not aggressively market their services.

I rarely see anybody ever approach us and say I'm a certified firm, I want to do business with you. We are all for that. It will be instantaneous lunch. Let's get to know you. Wife and kids let's get that all together. There is a little bit of ownership that has to come up on a certified contractor that they need to take ownership of let us know you exist. If you exist, we're going to be all over it.

We've had ["meet-and-greets" for her firm] and [M/W/DBEs] don't show up.

One solution proposed by several general contractors is to allow multiple certifications to count towards goals on locally-funded contracts.

If I had the options for MBE, WBE, SBE, DBE, if I had that rainbow of selection that I could go to, we could have been competitive on that job because we have other strategies but we're pigeon holed into one certification and a very high percentage so that to us, and that job is exactly what we do. We want that stuff all day long every day every year but we simply we could never get there.

If you do have a situation where you only can accept M or you only can accept B, I think you're going to see a decrease in your MWBE participation. Yes, you should show a blend of the three or four, whatever it is.

If you allow all the certifications and you lower the percentage, it gives us a lot of freedom to say hey, this is a smaller firm, let's split this scope in two. It's a 300,000 dollar deal. Let's give them 100 because that's their bread and butter. It just gives us more freedom to make it.

Maybe if you don't lower the percentage it would really help if we can use an M, a W, an S, or a DBE, that allows us so much more latitude when bidding these jobs to get qualified people.... Allow the different certifications instead of this single one because when you get on job where you have 10-15 subs and you're only allowed MBE, it's just very difficult to meet [goals].

Counting dollars to suppliers at 100 percent on non-FAA funded jobs was another idea (the DBE program regulations require suppliers to be counted at 60 percent).

I would like the supplier credit to be more than 60 percent.

Sometimes you literally don't bid just because you don't think you can make it. Knowing the good faith effort won't be considered, those situations would be resolved by counting suppliers 100 percent. We'd get closer.

Some prime vendors reported it is difficult to substitute a non-performing certified firm.

My frustration is when you have an underperforming subcontractor, there needs to be some level of, listen this is getting serious. And I don't care if you guys are in the same council together. I don't care if you're buddies over here. I don't care what you're doing. This is a serious problem, and you're expecting the prime to deal with it. And the prime's

doing all they can, and you won't let me fix it.... I have two boxes of emails that I had to produce six copies of. One for each subcontractor, with everybody in my office who had communicated with these contractors.... And still couldn't get rid of them until they filed for bankruptcy.

## **F. Experiences with DFW's ACDBE Program**

Overall, both ACDBEs and prime concessionaires agreed DFW's ACDBE program has created opportunities for minorities and women

Dallas is way ahead of the game in letting you know what is required upfront. They require a lot on the front end, which is great. And, also, they require approval of the joint venture agreement before the project is actually awarded, formally. So, I think that those are things that are helpful. And, in my opinion, it's one of the most assertive ACDBE programs in the country.

I think they have a very friendly staff. [name] is wonderful.

It's very obvious they take the program very seriously, which they should. And I would probably rank DFW in the top five of the level of scrutiny of making sure the primes are not just paying lip service to the program, but actually doing what they say they're doing. So, she's right. With RFPs, they're vetting the JVs upfront, which is a good thing. So, that's the time when you want to tweak your agreement before after it's been signed, and trying to get all of the partners back together to agree to operating agreement changes after the fact. I think they do a great job of going that sort of factors checklist to make sure everything's in order before you get too far into the business end, the actual partnership relationship.

DFW's one [airport] that's again really strong on [the contract compliance] side, on the responsibilities. And then the roles. And then the check boxes for the FAA. They're really leaning really hard on us for that.

A few ACDBEs disagreed, and believe BDDD does not protect their financial interests.

The Airport is really the one of the worst enemies for concessionaires

They're not helping us on making sure that we get paid.

We just need an advocate to help us follow the money.

Others reported they were paid timely.

We always get ours on time.

The size of concession packages was a barrier to ACDBE participation as prime concessionaires.

A few big guys that own these airports all over the world. And so that's when it's really tough.

The package from the Airport puts a package of 12 locations. I cannot get on 12 locations that specialized in [concession type].

## **G. Conclusion**

Overall, DFW's business diversity and development activities were reported to be helpful and properly administered. Certified firms have received work as a direct result of contract goals, and most stated that without the implementation of contract goals, their opportunities would be greatly diminished or non-existent. While prime vendors found it challenging to meet the goals, especially given the complexity and schedules for airport projects, most were able to include minority and women businesses on their contracts. The ACDBE program was generally lauded for creating opportunities for small firms.





# IV. UTILIZATION, AVAILABILITY AND DISPARITY ANALYSES FOR DALLAS FORT WORTH INTERNATIONAL AIRPORT

## A. Contract Data Overview

We analyzed contract data for the years 2012 through 2017 for DFW's FAA and non-FAA funded contracts and concession contracts. To conduct this analysis, we constructed all the fields necessary for our analysis where they were missing in the Airport's contract records (*e.g.*, industry type; zip codes; NAICS codes of prime contractors and subcontractors; non-certified subcontractor information, including payments, race, gender; etc.). The resulting Final Contract Data File ("FCDF") for analysis contained four subsets: non-FAA funded contracts; FAA funded contracts; non-car rental concessions; and car rental concessions. The *non-FAA funded contracts* subset contained 163 contracts, with a net paid amount of \$1,738,946,325; subcontractors received 1,523 contracts. Prime contractors received \$306,558,748 of the net paid amount; subcontractors received \$1,432,387,591 of the net paid amount. The *FAA funded contracts* subset contained five contracts, with a net paid amount of \$57,731,839; subcontractors received 41 contracts. Prime contractors received \$31,902,995 of the net paid amount; subcontractors received \$25,828,844 of the net paid amount. The *non-car rental concessions contracts* subset contained 1,054 contracts, with a net paid amount of \$2,084,819,161. The *car rental concessions contracts* subset contained 88 contracts, with a net paid amount of \$1,517,844,326.

The FCDF was used to determine the geographic and product markets for the analyses. It was also used to estimate the utilization of M/WBEs on non-FAA funded contracts; DBEs on FAA funded contracts; and ACDBEs on concession contracts. We then used the FCDF, in combination with other databases (as described below), to calculate M/WBE, DBE and ACDBE unweighted and weighted availability in the Airport's marketplace by funding source and contract type.

For purposes of goal setting, the availability estimates are weighted by the Airport's actual spending patterns, as determined by the NAICS codes it utilized. Weighting availability results is a more accurate picture of what firms are available to participate in the agency's opportunities. For example, high availability in a

NAISC code in which minimal dollars are spent would give the impression that there are more D/M/WBEs that can perform work on agency contracts than are actually ready, willing and able. Conversely, a low availability in a high dollar scope would understate the potential dollars that could be spent with D/M/WBEs.<sup>168</sup>

## **B. DFW’s Product and Geographic Markets for Non-FAA Funded Contracts**

As discussed in Chapter II, a defensible disparity study must determine empirically the industries that comprise the Airport’s product or industry market. This is also a requirement under the DBE program regulations official USDOT Guidance.<sup>169</sup> The accepted approach is to analyze those detailed industries, as defined by 6-digit North American Industry, Classification System (“NAICS”) codes<sup>170</sup> that make up at least 75 percent of the prime contract and subcontract payments for the study period.<sup>171</sup> However, for this study, we went further, and applied a “one percent” rule, whereby we analyzed NAICS codes for federally-funded contracts where the share of the total contract dollars (prime contracts and subcontract dollars combined) was at least one percent; where the share of the prime contract dollars was at least one percent of the total prime contract dollars; and where the share of subcontract dollars was at least one percent of the total subcontract dollars. We took this approach to assure a comprehensive analysis of the Airport’s activities.

### **1. DFW’s Unconstrained Product Markets for Non-FAA Funded Contracts**

Tables 4-1 through 4-3 present the NAICS codes used to define the unconstrained product market for the Airport’s non-FAA funded contracts.

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168. This is why the USDOT “Tips for Goal Setting” urge recipients to weight their headcount of firms by dollar spent. See <https://www.transportation.gov/osdbu/disadvantaged-business-enterprise/tips-goal-setting-disadvantaged-business-enterprise>.

169. [https://www.transportation.gov/sites/dot.gov/files/docs/Tips\\_for\\_Goal-Setting\\_in\\_DBE\\_Program\\_20141106.pdf](https://www.transportation.gov/sites/dot.gov/files/docs/Tips_for_Goal-Setting_in_DBE_Program_20141106.pdf); see also 49 C.F.R § 26.45.

170. [www.census.gov/eos/www/naics](http://www.census.gov/eos/www/naics).

171. National Academies of Sciences, Engineering, and Medicine 2010, *Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/14346>, pp. 50-51 (“*National Disparity Study Guidelines*”).

**Table 4-1: Industry Percentage Distribution of Contracts by Dollars Paid for Non-FAA Funded Contracts  
All Contracts**

| NAICS        | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|--|----------------------------|---------------------------------------|
| 236220       | Commercial and Institutional Building Construction               | 21.3%                      | 21.3%                                 |
| 238210       | Electrical Contractors and Other Wiring Installation Contractors | 17.3%                      | 38.6%                                 |
| 238120       | Structural Steel and Precast Concrete Contractors                | 10.0%                      | 48.6%                                 |
| 238220       | Plumbing, Heating, and Air-Conditioning Contractors              | 9.9%                       | 58.6%                                 |
| 238310       | Drywall and Insulation Contractors                               | 4.2%                       | 62.8%                                 |
| 562910       | Remediation Services   | 4.0%                       | 66.8%                                 |
| 238910       | Site Preparation Contractors                                     | 3.8%                       | 70.6%                                 |
| 541330       | Engineering Services   | 3.5%                       | 74.1%                                 |
| 488119       | Other Airport Operations   | 2.7%                       | 76.8%                                 |
| 236210       | Industrial Building Construction                                 | 1.5%                       | 78.3%                                 |
| 238130       | Framing Contractors  | 1.4%                       | 79.7%                                 |
| 238150       | Glass and Glazing Contractors                                    | 1.3%                       | 81.0%                                 |
| 237310       | Highway, Street, and Bridge Construction                         | 1.2%                       | 82.2%                                 |
| <b>TOTAL</b> |  |                            | <b>100.0%<sup>a</sup></b>             |

a. Agency spending across an additional 149 NAICS codes comprised 17.8 percent of all spending. A chart of all of these NAICS codes are in Appendix D.

Source: CHA analysis of DFW data

**Table 4-2: Industry Percentage Distribution of Contracts by Dollars Paid for Non-FAA Funded Contracts,  
Prime Contracts**

| NAICS  | NAICS Code Description                             | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|--|----------------------------|---------------------------------------|
| 236220 | Commercial and Institutional Building Construction | 67.7%                      | 67.7%                                 |
| 541330 | Engineering Services                               | 8.5%                       | 76.2%                                 |
| 812930 | Parking Lots and Garages                           | 2.7%                       | 78.9%                                 |

| NAICS        | NAICS Code Description  | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|---|----------------------------|---------------------------------------|
| 561320       | Temporary Help Services   | 2.3%                       | 81.2%                                 |
| 236210       | Industrial Building Construction  | 1.6%                       | 82.8%                                 |
| 518210       | Data Processing, Hosting, and Related Services  | 1.5%                       | 84.3%                                 |
| 237130       | Power and Communication Line and Related Structures Construction                      | 1.2%                       | 85.5%                                 |
| 541512       | Computer Systems Design Services  | 1.1%                       | 86.6%                                 |
| 334220       | Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing | 1.1%                       | 87.8%                                 |
| <b>TOTAL</b> |   |                            | <b>100.0%<sup>a</sup></b>             |

a. Agency spending across an additional 53 NAICS codes comprised 11.2 percent of all spending. A chart of all of these NAICS codes are in Appendix D.

Source: CHA analysis of DFW data

**Table 4-3: Industry Percentage Distribution of Contracts by Dollars Paid for Non-FAA Funded Contracts, Subcontracts**

| NAICS  | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|--|----------------------------|---------------------------------------|
| 238210 | Electrical Contractors and Other Wiring Installation Contractors | 21.0%                      | 21.0%                                 |
| 238120 | Structural Steel and Precast Concrete Contractors                | 12.1%                      | 33.2%                                 |
| 238220 | Plumbing, Heating, and Air-Conditioning Contractors              | 12.1%                      | 45.2%                                 |
| 236220 | Commercial and Institutional Building Construction               | 11.4%                      | 56.6%                                 |
| 238310 | Drywall and Insulation Contractors                               | 5.1%                       | 61.7%                                 |
| 562910 | Remediation Services   | 4.8%                       | 66.6%                                 |
| 238910 | Site Preparation Contractors                                     | 4.6%                       | 71.2%                                 |
| 488119 | Other Airport Operations   | 3.2%                       | 74.4%                                 |
| 541330 | Engineering Services   | 2.4%                       | 76.8%                                 |
| 238130 | Framing Contractors  | 1.7%                       | 78.5%                                 |
| 238150 | Glass and Glazing Contractors                                    | 1.6%                       | 80.1%                                 |

| NAICS        | NAICS Code Description                   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|--|----------------------------|---------------------------------------|
| 237310       | Highway, Street, and Bridge Construction | 1.4%                       | 81.6%                                 |
| 236210       | Industrial Building Construction         | 1.3%                       | 82.8%                                 |
| 238290       | Other Building Equipment Contractors     | 1.1%                       | 83.9%                                 |
| <b>TOTAL</b> |  |                            | <b>100.0%<sup>a</sup></b>             |

a. Agency spending across an additional 125 NAICS codes comprised 16.1 percent of all spending. A chart of all of these NAICS codes are in Appendix D.

Source: CHA analysis of DFW data

## 2. DFW’s Geographic Market for Non-FAA Funded Contracts

The courts (and the DBE program regulations<sup>172</sup> for DFW’s FAA funded contracts and concession contracts) require that a local government limit the reach of its race- and gender-conscious contracting program to its geographic market area.<sup>173</sup> This element of the analysis must be empirically established.<sup>174</sup> To determine the relevant geographic market area, we applied the standard of identifying the firm locations that account for at least 75 percent of contract and subcontract dollar payments in the contract data file.<sup>175</sup> Location was determined by ZIP code and aggregated into counties as the geographic unit.

The State of Texas contained 91.4 percent of the contract dollars in this market. Table 4-4 lists how these dollars were distributed across counties in Texas. Since Dallas, Tarrant, Denton, and Collin Counties captures 95.5 percent of the in-state dollars, those four counties comprised the geographic market.<sup>176</sup>

172. [https://www.transportation.gov/sites/dot.gov/files/docs/Tips\\_for\\_Goal-Setting\\_in\\_DBE\\_Program\\_20141106.pdf](https://www.transportation.gov/sites/dot.gov/files/docs/Tips_for_Goal-Setting_in_DBE_Program_20141106.pdf); see also 49 C.F.R § 26.45.

173. *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 508 (1989) (Richmond was specifically faulted for including minority contractors from across the country in its program based on the national evidence that supported the USDOT DBE program).

174. *Concrete Works of Colorado, Inc. v. City and County of Denver*, 36 F.3d 1513, 1520 (10th Cir. 1994) (to confine data to strict geographic boundaries would ignore “economic reality”).

175. *National Disparity Study Guidelines*, p. 49.

176. Eight counties reported values of 0.0 percent. There was agency spending in these counties; however, the spending was less than \$500,000 and when the counties’ share of agency spending was rounded to one decimal place, the results were values of 0.0 percent.

**Table 4-4: Distribution of Contracts in DFW’s Product Market for Non-FAA Funded Contracts**

| State/County | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|----------------------------|---------------------------------------|
| Dallas       | 61.9%                      | 61.9%                                 |
| Tarrant      | 25.7%                      | 87.6%                                 |
| Denton       | 6.4%                       | 94.0%                                 |
| Collin       | 1.6%                       | 95.5%                                 |
| Johnson      | 0.9%                       | 96.5%                                 |
| Wise         | 0.7%                       | 97.2%                                 |
| Upshur       | 0.4%                       | 97.6%                                 |
| Grayson      | 0.4%                       | 98.1%                                 |
| Harris       | 0.3%                       | 98.4%                                 |
| Ellis        | 0.3%                       | 98.7%                                 |
| Rockwall     | 0.3%                       | 99.0%                                 |
| Bexar        | 0.2%                       | 99.2%                                 |
| Wilson       | 0.2%                       | 99.4%                                 |
| Travis       | 0.2%                       | 99.5%                                 |
| Lubbock      | 0.1%                       | 99.7%                                 |
| Parker       | 0.1%                       | 99.8%                                 |
| Hunt         | 0.1%                       | 99.8%                                 |
| Kaufman      | 0.1%                       | 99.9%                                 |
| Van Zandt    | 0.0%                       | 99.9%                                 |
| Fort Bend    | 0.0%                       | 99.9%                                 |
| Austin       | 0.0%                       | 100.0%                                |
| Henderson    | 0.0%                       | 100.0%                                |
| Gregg        | 0.0%                       | 100.0%                                |
| Navarro      | 0.0%                       | 100.0%                                |
| Montgomery   | 0.0%                       | 100.0%                                |
| Wichita      | 0.0%                       | 100.0%                                |
| <b>TOTAL</b> |                            | <b>100.0%</b>                         |

Source: CHA analysis of DFW data

### 3. DFW’s Utilization of M/WBEs on Non-FAA Funded Contracts

Having determined the Airport’s product and geographic market area for non-FAA funded contracts (and, therefore, the agency’s *constrained* product market), the next step was to determine the dollar value of the agency’s utilization of M/WBEs<sup>177</sup> as measured by payments to prime firms and subcontractors and disaggregated by race and gender. The Airport did not collect data for all non-M/WBE subcontractors, as well as other records critical for the study. We therefore had to obtain missing data from prime vendors, a lengthy process, and reconstruct other contract records, including researching the race and gender ownership of subcontractors and assigning NAICS codes to those firms.

Tables 4-5 through 4-7 present data on the utilization of total contract dollars paid with non-FAA funded dollars in the constrained product market. (Note the contract dollar shares in Table 4-5 are equivalent to the weight of each NAICS code spending. These weights were used to transform data from unweighted availability to weighted availability, discussed below.)

**Table 4-5: NAICS Code Distribution of Non-FAA Funded Contract Dollars**

| NAICS  | NAICS Code Description   | Total Contract Dollars | Pct Total Contract Dollars |
|--------|--|------------------------|----------------------------|
| 236220 | Commercial and Institutional Building Construction               | \$304,413,024.00       | 22.8%                      |
| 238210 | Electrical Contractors and Other Wiring Installation Contractors | \$285,881,920.00       | 21.4%                      |
| 238120 | Structural Steel and Precast Concrete Contractors                | \$167,127,376.00       | 12.5%                      |
| 238220 | Plumbing, Heating, and Air-Conditioning Contractors              | \$164,201,904.00       | 12.3%                      |
| 562910 | Remediation Services   | \$69,445,928.00        | 5.2%                       |
| 238910 | Site Preparation Contractors                                     | \$65,587,716.00        | 4.9%                       |
| 238310 | Drywall and Insulation Contractors                               | \$60,061,112.00        | 4.5%                       |
| 541330 | Engineering Services   | \$43,330,376.00        | 3.2%                       |
| 488119 | Other Airport Operations   | \$42,957,220.00        | 3.2%                       |
| 238130 | Framing Contractors  | \$24,480,378.00        | 1.8%                       |
| 236210 | Industrial Building Construction                                 | \$23,073,884.00        | 1.7%                       |

177. We use the terms “M/WBEs” to include firms owned by racial or ethnic minorities and white females that are not certified as M/WBEs by an agency recognized by the Airport. This casts the “broad net” required by the courts, as discussed in Chapter II.

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| NAICS        | NAICS Code Description  | Total Contract Dollars    | Pct Total Contract Dollars |
|--------------|---|---------------------------|----------------------------|
| 237310       | Highway, Street, and Bridge Construction  | \$20,215,924.00           | 1.5%                       |
| 561320       | Temporary Help Services   | \$18,160,291.25           | 1.1%                       |
| 238290       | Other Building Equipment Contractors  | \$14,918,440.00           | 1.1%                       |
| 812930       | Parking Lots and Garages  | \$8,210,468.00            | 0.6%                       |
| 238150       | Glass and Glazing Contractors   | \$8,035,963.00            | 0.6%                       |
| 237130       | Power and Communication Line and Related Structures Construction                      | \$4,013,025.75            | 0.3%                       |
| 518210       | Data Processing, Hosting, and Related Services  | \$3,568,214.75            | 0.3%                       |
| 334220       | Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing | \$3,357,984.50            | 0.3%                       |
| 541512       | Computer Systems Design Services  | \$2,758,756.00            | 0.3%                       |
| <b>Total</b> |   | <b>\$1,333,799,905.25</b> | <b>100.0%</b>              |

*Source: CHA analysis of DFW data*



**Table 4-6: Distribution of Non-FAA Funded Contract Dollars by Race and Gender (total dollars)**

| NAICS        | Black               | Hispanic             | Asian               | Native American     | White Women          | M/WBE                | Non-M/WBE            | Total                  |
|--------------|---------------------|----------------------|---------------------|---------------------|----------------------|----------------------|----------------------|------------------------|
| 236210       | \$590,908           | \$7,889,466          | \$0                 | \$0                 | \$611,607            | \$9,091,981          | \$13,981,901         | \$23,073,883           |
| 236220       | \$7,230,662         | \$80,351,431         | \$1,379,981         | \$0                 | \$438,928            | \$89,401,002         | \$215,012,013        | \$304,413,016          |
| 237130       | \$0                 | \$3,165,861          | \$0                 | \$0                 | \$847,164            | \$4,013,025          | \$0                  | \$4,013,026            |
| 237310       | \$0                 | \$1,543,347          | \$0                 | \$0                 | \$3,966,350          | \$5,509,697          | \$14,706,227         | \$20,215,924           |
| 238120       | \$17,353,544        | \$54,553,890         | \$0                 | \$1,265,858         | \$15,454,640         | \$88,627,932         | \$78,499,448         | \$167,127,380          |
| 238130       | \$137,703           | \$21,016,684         | \$958,172           | \$0                 | \$0                  | \$22,112,559         | \$2,367,819          | \$24,480,378           |
| 238150       | \$0                 | \$4,214,993          | \$14,366            | \$0                 | \$2,371,419          | \$6,600,778          | \$1,435,185          | \$8,035,963            |
| 238210       | \$9,218,865         | \$74,837,088         | \$0                 | \$2,360,172         | \$27,254,195         | \$113,670,320        | \$172,211,598        | \$285,881,919          |
| 238220       | \$3,917,851         | \$6,659,777          | \$6,577,576         | \$3,345,363         | \$31,095,037         | \$51,595,604         | \$112,606,301        | \$164,201,906          |
| 238290       | \$0                 | \$9,360,365          | \$0                 | \$0                 | \$1,039,366          | \$10,399,731         | \$4,518,709          | \$14,918,440           |
| 238310       | \$14,096            | \$1,612,943          | \$5,220,645         | \$0                 | \$3,895,233          | \$10,742,917         | \$49,318,196         | \$60,061,113           |
| 238910       | \$11,158,790        | \$19,356,944         | \$1,134,304         | \$0                 | \$11,184,135         | \$42,834,173         | \$22,753,542         | \$65,587,714           |
| 334220       | \$0                 | \$0                  | \$0                 | \$0                 | \$54,309             | \$54,309             | \$3,303,676          | \$3,357,985            |
| 488119       | \$2,161,053         | \$0                  | \$0                 | \$0                 | \$514,145            | \$2,675,198          | \$40,282,022         | \$42,957,220           |
| 518210       | \$0                 | \$10,415             | \$0                 | \$0                 | \$3,557,800          | \$3,568,215          | \$0                  | \$3,568,215            |
| 541330       | \$8,267,548         | \$2,008,316          | \$2,936,414         | \$6,418             | \$1,873,251          | \$15,091,947         | \$28,238,431         | \$43,330,377           |
| 541512       | \$0                 | \$0                  | \$0                 | \$0                 | \$129,629            | \$129,629            | \$2,629,128          | \$2,758,756            |
| 561320       | \$386,428           | \$5,992,911          | \$2,226,794         | \$0                 | \$9,505,003          | \$18,111,136         | \$49,156             | \$18,160,291           |
| 562910       | \$0                 | \$14,734,933         | \$1,900             | \$3,867,844         | \$4,361,900          | \$22,966,577         | \$46,479,353         | \$69,445,930           |
| 812930       | \$0                 | \$0                  | \$0                 | \$0                 | \$0                  | \$0                  | \$8,210,468          | \$8,210,468            |
| <b>Total</b> | <b>\$60,437,449</b> | <b>\$307,309,363</b> | <b>\$20,450,152</b> | <b>\$10,845,655</b> | <b>\$118,154,111</b> | <b>\$517,196,730</b> | <b>\$816,603,172</b> | <b>\$1,333,799,903</b> |

Source: CHA analysis of DFW data

**Table 4-7: Distribution of Non-FAA Funded Contract Dollars by Race and Gender  
(share of total dollars)**

| NAICS        | Black       | Hispanic     | Asian       | Native American | White Women | M/WBE        | Non-M/WBE    | Total         |
|--------------|-------------|--------------|-------------|-----------------|-------------|--------------|--------------|---------------|
| 236210       | 2.6%        | 34.2%        | 0.0%        | 0.0%            | 2.7%        | 39.4%        | 60.6%        | 100.0%        |
| 236220       | 2.4%        | 26.4%        | 0.5%        | 0.0%            | 0.1%        | 29.4%        | 70.6%        | 100.0%        |
| 237130       | 0.0%        | 78.9%        | 0.0%        | 0.0%            | 21.1%       | 100.0%       | 0.0%         | 100.0%        |
| 237310       | 0.0%        | 7.6%         | 0.0%        | 0.0%            | 19.6%       | 27.3%        | 72.7%        | 100.0%        |
| 238120       | 10.4%       | 32.6%        | 0.0%        | 0.8%            | 9.2%        | 53.0%        | 47.0%        | 100.0%        |
| 238130       | 0.6%        | 85.9%        | 3.9%        | 0.0%            | 0.0%        | 90.3%        | 9.7%         | 100.0%        |
| 238150       | 0.0%        | 52.5%        | 0.2%        | 0.0%            | 29.5%       | 82.1%        | 17.9%        | 100.0%        |
| 238210       | 3.2%        | 26.2%        | 0.0%        | 0.8%            | 9.5%        | 39.8%        | 60.2%        | 100.0%        |
| 238220       | 2.4%        | 4.1%         | 4.0%        | 2.0%            | 18.9%       | 31.4%        | 68.6%        | 100.0%        |
| 238290       | 0.0%        | 62.7%        | 0.0%        | 0.0%            | 7.0%        | 69.7%        | 30.3%        | 100.0%        |
| 238310       | 0.0%        | 2.7%         | 8.7%        | 0.0%            | 6.5%        | 17.9%        | 82.1%        | 100.0%        |
| 238910       | 17.0%       | 29.5%        | 1.7%        | 0.0%            | 17.1%       | 65.3%        | 34.7%        | 100.0%        |
| 334220       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 1.6%        | 1.6%         | 98.4%        | 100.0%        |
| 488119       | 5.0%        | 0.0%         | 0.0%        | 0.0%            | 1.2%        | 6.2%         | 93.8%        | 100.0%        |
| 518210       | 0.0%        | 0.3%         | 0.0%        | 0.0%            | 99.7%       | 100.0%       | 0.0%         | 100.0%        |
| 541330       | 19.1%       | 4.6%         | 6.8%        | 0.0%            | 4.3%        | 34.8%        | 65.2%        | 100.0%        |
| 541512       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 4.7%        | 4.7%         | 95.3%        | 100.0%        |
| 561320       | 2.1%        | 33.0%        | 12.3%       | 0.0%            | 52.3%       | 99.7%        | 0.3%         | 100.0%        |
| 562910       | 0.0%        | 21.2%        | 0.0%        | 5.6%            | 6.3%        | 33.1%        | 66.9%        | 100.0%        |
| 812930       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 0.0%        | 0.0%         | 100.0%       | 100.0%        |
| <b>Total</b> | <b>4.5%</b> | <b>23.0%</b> | <b>1.5%</b> | <b>0.8%</b>     | <b>8.9%</b> | <b>38.8%</b> | <b>61.2%</b> | <b>100.0%</b> |

Source: CHA analysis of DFW data

#### 4. Availability of M/WBEs in DFW’s Markets for Non-FAA Funded Contracts

##### a. Methodological Framework

Estimates of the availability of M/WBEs in the Airport’s market area are a critical component of the analysis of possible barriers to equal opportunities to participate in the agency’s contracting activities. These availability

estimates are compared to the utilization percentage of dollars received by M/WBEs to examine whether minority- and women-owned firms receive parity.<sup>178</sup> Availability estimates are also crucial for the Airport to set narrowly tailored annual and contract goals on its contracts covered by its M/WBE, SBE, DBE and ACDBE programs.

We generally applied the “custom census” approach with refinements to estimating availability. The courts and the National Model Disparity Study Guidelines<sup>179</sup> have recognized this methodology as superior to the other methods for at least four reasons:

- First, it provides an internally consistent and rigorous “apples to apples” comparison between firms in the availability numerator and those in the denominator. Other approaches often have different definitions for the firms in the numerator (*e.g.*, certified M/WBEs or firms that respond to a survey) and the denominator (*e.g.*, registered vendors or the Census Bureau’s County Business Patterns data).
- Second, by examining a comprehensive group of firms, it “casts a broader net” beyond those known to the agency. As recognized by the courts, this comports with the remedial nature of contracting affirmative action programs by seeking to bring in businesses that have historically been excluded. Our methodology is less likely to be tainted by the effects of past and present discrimination than other methods, such as bidders’ lists, because it seeks out firms in the Airport’s market areas that have not been able to access the agency’s opportunities.
- Third, this approach is less impacted by variables affected by discrimination. Factors such as firm age, size, qualifications, and experience are all elements of business success where discrimination would be manifested. Most courts have held that the results of discrimination – which impact factors affecting capacity – should not be the benchmark for a program designed to ameliorate the effects of discrimination. They have acknowledged that minority and women firms may be smaller, newer, and otherwise less competitive than non-M/WBEs because of the very discrimination sought to be remedied by race-conscious contracting programs. Racial and gender

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178. For our analysis, the term “M/WBE” includes firms that are certified by government agencies and minority- and women-owned firms that are not certified. As discussed in Chapter II, the inclusion of all minority- and female-owned businesses in the pool casts the broad net approved by the courts and recommended by the USDOT that supports the remedial nature of the programs. See *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715, 723 (7th Cir. 2007) (The “remedial nature of the federal scheme militates in favor of a method of DBE availability calculation that casts a broader net.”). [https://www.transportation.gov/sites/dot.gov/files/docs/Tips\\_for\\_Goal-Setting\\_in\\_DBE\\_Program\\_20141106.pdf](https://www.transportation.gov/sites/dot.gov/files/docs/Tips_for_Goal-Setting_in_DBE_Program_20141106.pdf).

179. *National Disparity Study Guidelines*, pp.57-58.

differences in these “capacity” factors are the outcomes of discrimination and it is therefore inappropriate as a matter of economics and statistics to use them as “control” variables in a disparity study.<sup>180</sup>

- Fourth, it has been upheld by every court that has reviewed it, including most recently in the successful defense of the Illinois State Toll Highway’s DBE program, for which we served as testifying experts.<sup>181</sup>

Using this framework, CHA utilized three databases to estimate availability:

- The FCDF, which contains DFW’s contract data (described in Section B of this Chapter);
- The Master D/M/WBE Directory compiled by CHA; and
- The Dun & Bradstreet/Hoovers Database downloaded from the company’s website.

The Master D/M/WBE Directory combined the results of an exhaustive search for directories and other lists containing information about minority- and women-owned businesses. The resulting list of minority and women businesses is comprehensive. After compiling the Master D/M/WBE Directory, we limited the firms we used in our analysis to those operating within the Airport’s constrained product market.

We next developed a custom database from Hoovers, a Dun & Bradstreet company. Hoovers maintains a comprehensive, extensive and regularly updated listing of all firms conducting business. The database includes a vast amount of information on each firm, including location and detailed industry codes, and is the broadest publicly available data source for firm information. We purchased the information from Hoovers for the firms in the NAICS codes located in the Airport’s market area in order to form our custom Dun & Bradstreet/Hoovers Database. In the initial download, the data from Hoovers simply identifies a firm as being minority-owned.<sup>182</sup> However, the company does keep detailed information on ethnicity (*i.e.*, is the minority firm owner Black, Hispanic, Asian, or Native American). We obtained this additional information from Hoovers by special request.<sup>183</sup>

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180. For a detailed discussion of the role of capacity in disparity studies, see *National Disparity Study Guidelines*, Appendix B, “Understanding Capacity.”

181. *Midwest Fence, Corp. v. U.S. Department of Transportation et al.*, 840 F.3d 932 (7th Cir. 2016); see also *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7th Cir. 2007), *cert. denied*, 137 S.Ct. 2292 (2017).

182. The variable is labeled: “Is Minority Owned” and values for the variable can be either “yes” or “no”.

183. Hoovers was able to provide the detailed information for 75 percent of the firms. We used the available information to estimate the detailed information for the firms where the data was not provided.

We merged these three databases to form an accurate estimate of firm availability to the agency. Tables 4-8 through 4-14 present data on:

- The unweighted availability by race and gender and by NAICS codes for non-FAA funded contracts in the Airport’s constrained product markets;
- The weights used to adjust the unweighted numbers<sup>184</sup>;
- The final estimates of the weighted averages of the individual 6-digit level availability estimates in the Airport’s market areas. These weighted availability estimates can be used by the agency to set its M/WBE, DBE<sup>185</sup> and ACDBE goals.
- And the disparity ratios for non-FAA funded contracts by demographic group.

**Table 4-8: Unweighted Availability for Non-FAA Funded Contracts**

| NAICS  | Black | Latino | Asian | Native American | White Women | M/WBE | Non-M/WBE | Total  |
|--------|-------|--------|-------|-----------------|-------------|-------|-----------|--------|
| 236210 | 9.1%  | 9.5%   | 4.0%  | 1.3%            | 11.0%       | 34.9% | 65.1%     | 100.0% |
| 236220 | 12.9% | 10.6%  | 5.0%  | 1.1%            | 10.6%       | 40.2% | 59.8%     | 100.0% |
| 237130 | 5.4%  | 5.4%   | 3.2%  | 0.4%            | 11.9%       | 26.3% | 73.7%     | 100.0% |
| 237310 | 14.4% | 14.2%  | 3.6%  | 1.1%            | 10.6%       | 44.0% | 56.0%     | 100.0% |
| 238120 | 8.4%  | 19.9%  | 2.4%  | 2.8%            | 11.8%       | 45.4% | 54.6%     | 100.0% |
| 238130 | 35.6% | 35.6%  | 3.4%  | 3.4%            | 5.1%        | 83.1% | 16.9%     | 100.0% |
| 238150 | 0.5%  | 4.7%   | 2.5%  | 0.1%            | 19.7%       | 27.5% | 72.5%     | 100.0% |
| 238210 | 3.4%  | 4.2%   | 1.8%  | 0.5%            | 7.4%        | 17.3% | 82.7%     | 100.0% |
| 238220 | 2.0%  | 1.8%   | 0.8%  | 0.2%            | 4.6%        | 9.5%  | 90.5%     | 100.0% |
| 238290 | 7.6%  | 15.0%  | 3.0%  | 1.9%            | 16.5%       | 44.0% | 56.0%     | 100.0% |
| 238310 | 5.1%  | 7.3%   | 0.8%  | 0.6%            | 6.5%        | 20.3% | 79.7%     | 100.0% |
| 238910 | 8.8%  | 11.0%  | 2.6%  | 0.9%            | 12.2%       | 35.5% | 64.5%     | 100.0% |
| 334220 | 1.3%  | 2.1%   | 1.3%  | 0.9%            | 9.1%        | 14.7% | 85.3%     | 100.0% |
| 488119 | 1.0%  | 0.8%   | 0.6%  | 0.1%            | 3.6%        | 6.1%  | 93.9%     | 100.0% |
| 518210 | 2.9%  | 1.5%   | 3.6%  | 0.5%            | 12.0%       | 20.6% | 79.4%     | 100.0% |
| 541330 | 5.7%  | 6.5%   | 6.9%  | 1.1%            | 10.0%       | 30.2% | 69.8%     | 100.0% |

184. These weights are equivalent to the share of contract dollars presented in the previous section.

185. 49 C.F.R. § 26.45(c).

| NAICS        | Black       | Latino      | Asian       | Native American | White Women | M/WBE        | Non-M/WBE    | Total         |
|--------------|-------------|-------------|-------------|-----------------|-------------|--------------|--------------|---------------|
| 541512       | 5.1%        | 3.6%        | 7.6%        | 0.4%            | 8.4%        | 25.1%        | 74.9%        | 100.0%        |
| 561320       | 5.4%        | 4.5%        | 7.1%        | 0.8%            | 12.8%       | 31.3%        | 69.4%        | 100.0%        |
| 562910       | 16.9%       | 15.0%       | 5.8%        | 2.8%            | 22.9%       | 63.4%        | 36.6%        | 100.0%        |
| 812930       | 2.1%        | 2.1%        | 0.4%        | 0.6%            | 4.0%        | 9.2%         | 90.8%        | 100.0%        |
| <b>Total</b> | <b>5.4%</b> | <b>5.4%</b> | <b>3.8%</b> | <b>0.7%</b>     | <b>8.5%</b> | <b>22.7%</b> | <b>76.2%</b> | <b>100.0%</b> |

Source: CHA analysis of DFW data; Hoovers; CHA Master Directory

**Table 4-9: Share of DFW Spending on Non-FAA Funded Contracts by NAICS Code**

| NAICS  | NAICS Code Description  | WEIGHT (Pct Share of Total Sector Dollars) |
|--------|---|--|
| 236210 | Industrial Building Construction  | 1.7%                                       |
| 236220 | Commercial and Institutional Building Construction                                    | 22.8%                                      |
| 237130 | Power and Communication Line and Related Structures Construction                      | 0.3%                                       |
| 237310 | Highway, Street, and Bridge Construction  | 1.5%                                       |
| 238120 | Structural Steel and Precast Concrete Contractors                                     | 12.5%                                      |
| 238130 | Framing Contractors   | 1.8%                                       |
| 238150 | Glass and Glazing Contractors   | 0.6%                                       |
| 238210 | Electrical Contractors and Other Wiring Installation Contractors                      | 21.4%                                      |
| 238220 | Plumbing, Heating, and Air-Conditioning Contractors                                   | 12.3%                                      |
| 238290 | Other Building Equipment Contractors  | 1.1%                                       |
| 238310 | Drywall and Insulation Contractors  | 4.5%                                       |
| 238910 | Site Preparation Contractors  | 4.9%                                       |
| 334220 | Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing | 0.3%                                       |
| 488119 | Other Airport Operations  | 3.2%                                       |
| 518210 | Data Processing, Hosting, and Related Services  | 0.3%                                       |
| 541330 | Engineering Services  | 3.2%                                       |
| 541512 | Computer Systems Design Services  | 0.2%                                       |
| 561320 | Temporary Help Services   | 1.4%                                       |

| NAICS        | NAICS Code Description   | WEIGHT (Pct Share of Total Sector Dollars) |
|--------------|--------------------------|--|
| 562910       | Remediation Services     | 5.2%                                       |
| 812930       | Parking Lots and Garages | 0.6%                                       |
| <b>Total</b> |                          | <b>100.0%</b>                              |

Source: CHA analysis of DFW data

**Table 4-10: Aggregated Weighted Availability for Non-FAA Funded Contracts**

| Black | Hispanic | Asian | Native American | White Women | M/WBE | Non-M/WBE | Total  |
|-------|----------|-------|-----------------|-------------|-------|-----------|--------|
| 8.0%  | 9.3%     | 3.0%  | 1.1%            | 9.6%        | 31.0% | 69.0%     | 100.0% |

Source: CHA analysis of DFW data; Hoovers; CHA Master Directory

**Table 4-11: Disparity Ratios by Demographic Group  
Non-FAA Funded Contracts**

|                 | Black              | Hispanic | Asian              | Native American    | White Women | M/WBE    | Non-M/WBE |
|-----------------|--------------------|----------|--------------------|--------------------|-------------|----------|-----------|
| Disparity Ratio | 56.9% <sup>‡</sup> | 248.5%   | 50.8% <sup>‡</sup> | 70.8% <sup>‡</sup> | 91.9%       | 124.9%** | 88.8%     |

Source: CHA analysis of DFW data; Hoovers; CHA Master Directory

<sup>‡</sup> Indicates substantive significance

\*\*Indicates statistical significance at the 0.01 level<sup>186</sup>

The Hispanic disparity ratio was 248.5 percent. Given our work on dozens of previous disparity studies, this result appeared counter intuitive. We surmised an explanation for this result was a concentration of Hispanic firms in a few NAICS codes where agency spending was high. We conducted further analysis and our hypothesis was confirmed.

Table 4-12 presents data on the three NAICS codes where the Airport’s spending was the greatest (totaling over half of agency spending). In these NAICS codes, we found high levels of Hispanic utilization.

186. Appendix C discusses the meaning and role of statistical significance.

**Table 4-12: Hispanic Utilization in Three NAICS Codes**

| NAICS  | NAICS Code Description   | WEIGHT (Pct Share of Total Sector Dollars) | Hispanic Utilization |
|--------|--|--|----------------------|
| 236220 | Commercial and Institutional Building Construction               | 22.8%                                      | 26.4%                |
| 238120 | Structural Steel and Precast Concrete Contractors                | 12.5%                                      | 32.6%                |
| 238210 | Electrical Contractors and Other Wiring Installation Contractors | 21.4%                                      | 26.2%                |

*Source: CHA analysis of DFW data*

Table 4-13 presents data indicating the pattern of distribution of contracts and contract dollars for Hispanics and non-Hispanics: 56.0 percent of all Hispanic contracts are concentrated in these three NAICS codes, compared to 36.6 percent of non-Hispanic firms. In addition, 68.3 percent of all contract dollars received by Hispanics go to firms in these three NAICS codes, compared to 53.4 percent of all contract dollars received by non-Hispanic firms.

**Table 4-13: Aggregate Distribution of Contracts and Contract Dollars in Three NAICS Codes**

| Group               | % of Contracts | % of Dollars |
|---------------------|----------------|--------------|
| Hispanic            | 56.0%          | 68.3%        |
| ALL Minus Hispanics | 36.6%          | 53.4%        |

*Source: CHA analysis of DFW data*

In addition, Hispanic business activity is concentrated among a very small number of firms. Table 4-14 shows how these firms dominate the number of contracts awarded to Hispanics and the total contract dollars received by Hispanics.



**Table 4-14: Concentration of Hispanic Business Activity in a Small Number of Firms**

| NAICS codes | Number of Hispanic firms | % share of Hispanic contracts | % share of Hispanic dollars |
|-------------|--------------------------|-------------------------------|-----------------------------|
| 236220      | 2                        | 71.0%                         | 45.8%                       |
| 238120      | 2                        | 30.8%                         | 85.0%                       |
| 238220      | 3                        | 80.9%                         | 54.1%                       |

Source: CHA analysis of DFW data

We believe the unusually high disparity ratio for Hispanic firms is indicative of this atypical concentration of Hispanic business activity.

## C. DFW’s FAA Funded Contracts

### 1. DFW’s Unconstrained Product Markets for FAA Funded Contracts

Because the data set contained only 46 FAA funded contracts (from 21 NAICS codes), we included all of the contracts in the *unconstrained product market* and did not utilize the “One Percent Rule” that was used in analyzing non-FAA funded contracts. Table 4-15 presents this data.<sup>187</sup>

Tables 4-15 through 4-17 present the NAICS codes used to define the *unconstrained* product market for the Airport’s FAA funded contracts. These data were later constrained by the geographic market, discussed below. These contracts were disaggregated by level of contract (*i.e.*, was the firm receiving the contract as a prime vendor or as a subcontractor), the industry label for each NAICS code, and the industry percentage distribution of the number of contracts and spending across NAICS codes.

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187. A breakdown of the unconstrained product market by Prime and Subcontractor data is not provided for FAA-funded contracts because there are only 46 contracts in the data set.

**Table 4-15: Industry Percentage Distribution of Contracts by Dollars Paid  
for FAA Funded Contracts, All Contracts**

| NAICS        | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|--|----------------------------|---------------------------------------|
| 236220       | Commercial and Institutional Building Construction               | 54.6%                      | 54.6%                                 |
| 541330       | Engineering Services   | 16.1%                      | 70.7%                                 |
| 238210       | Electrical Contractors and Other Wiring Installation Contractors | 8.7%                       | 79.4%                                 |
| 238220       | Plumbing, Heating, and Air-Conditioning Contractors              | 4.9%                       | 84.3%                                 |
| 335312       | Motor and Generator Manufacturing                                | 2.4%                       | 86.7%                                 |
| 212312       | Crushed and Broken Limestone Mining and Quarrying                | 2.2%                       | 88.9%                                 |
| 238120       | Structural Steel and Precast Concrete Contractors                | 1.5%                       | 90.4%                                 |
| 811412       | Appliance Repair and Maintenance                                 | 1.5%                       | 91.9%                                 |
| 327320       | Ready-Mix Concrete Manufacturing                                 | 1.3%                       | 93.2%                                 |
| 484220       | Specialized Freight (except Used Goods) Trucking, Local          | 1.0%                       | 94.2%                                 |
| 488119       | Other Airport Operations   | 0.9%                       | 95.1%                                 |
| 331110       | Iron and Steel Mills and Ferroalloy Manufacturing                | 0.9%                       | 95.9%                                 |
| 236210       | Industrial Building Construction                                 | 0.9%                       | 96.8%                                 |
| 238910       | Site Preparation Contractors                                     | 0.7%                       | 97.5%                                 |
| 332613       | Spring Manufacturing   | 0.6%                       | 98.1%                                 |
| 237310       | Highway, Street, and Bridge Construction                         | 0.6%                       | 98.7%                                 |
| 237990       | Other Heavy and Civil Engineering Construction                   | 0.4%                       | 99.1%                                 |
| 238990       | All Other Specialty Trade Contractors                            | 0.4%                       | 99.5%                                 |
| 541380       | Testing Laboratories   | 0.4%                       | 99.9%                                 |
| 324121       | Asphalt Paving Mixture and Block Manufacturing                   | 0.0%                       | 100.0%                                |
| 561730       | Landscaping Services   | 0.0%                       | 100.0%                                |
| <b>TOTAL</b> |  |                            | <b>100.0%</b>                         |

Source: CHA analysis of DFW data

## 2. DFW’s Geographic Market for FAA Funded Contracts

We used the same approach to determine the geographic market for FAA funded activity as was used for non-FAA funded activity, discussed above. The State of Texas contained 94.7 percent of contract dollars in the unconstrained product market for FAA funded contracts. Since Dallas, Denton, and Tarrant Counties contained 98.3 percent of all in-state dollars, these three counties constituted the geographic market. This result is presented in Table 4-16.

**Table 4-16: Distribution of Contracts in DFW’s Product Market for FAA Funded Contracts**

| State/County | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|----------------------------|---------------------------------------|
| Dallas       | 61.6%                      | 61.6%                                 |
| Denton       | 29.1%                      | 90.7%                                 |
| Tarrant      | 7.6%                       | 98.3%                                 |
| Collin       | 0.9%                       | 99.2%                                 |
| Williamson   | 0.7%                       | 99.8%                                 |
| Johnson      | 0.1%                       | 99.9%                                 |
| Rockwall     | 0.0%                       | 100.0%                                |
| Harris       | 0.0%                       | 100.0%                                |
| <b>TOTAL</b> |                            | <b>100.0%</b>                         |

Source: CHA analysis of DFW data

## 3. DFW’s Utilization of DBEs on FAA Funded Contracts

Tables 4-17 through 4-19 present data on the utilization of total FAA funded contract dollars. As noted in the section on non-FAA spending, the contract dollar shares (in Table 4-17) are equivalent to the weight of each NAICS code spend. These weights were used to transform data from unweighted availability to weighted availability, discussed below.

**Table 4-17: NAICS Code Distribution of FAA Funded Contract Dollars**

| NAICS        | NAICS Code Description   | Total Contract Dollars | Pct Total Contract Dollars |
|--------------|--|------------------------|----------------------------|
| 236220       | Commercial and Institutional Building Construction               | \$31,512,928.00        | 58.1%                      |
| 541330       | Engineering Services   | \$9,280,979.00         | 17.1%                      |
| 238210       | Electrical Contractors and Other Wiring Installation Contractors | \$5,029,878.00         | 9.3%                       |
| 238220       | Plumbing, Heating, and Air-Conditioning Contractors              | \$2,829,808.50         | 5.2%                       |
| 212312       | Crushed and Broken Limestone Mining and Quarrying                | \$1,276,011.38         | 2.4%                       |
| 238120       | Structural Steel and Precast Concrete Contractors                | \$864,721.56           | 1.6%                       |
| 811412       | Appliance Repair and Maintenance                                 | \$854,821.81           | 1.6%                       |
| 327320       | Ready-Mix Concrete Manufacturing                                 | \$712,781.31           | 1.3%                       |
| 488119       | Other Airport Operations   | \$504,414.81           | 0.9%                       |
| 238910       | Site Preparation Contractors                                     | \$356,094.19           | 0.7%                       |
| 237310       | Highway, Street, and Bridge Construction                         | \$289,690.25           | 0.5%                       |
| 238990       | All Other Specialty Trade Contractors                            | \$231,873.50           | 0.4%                       |
| 541380       | Testing Laboratories   | \$221,599.02           | 0.4%                       |
| 484220       | Specialized Freight (except Used Goods) Trucking, Local          | \$215,503.52           | 0.4%                       |
| 324121       | Asphalt Paving Mixture and Block Manufacturing                   | \$21,924.36            | 0.0%                       |
| <b>Total</b> |  | <b>\$54,203,029.21</b> | <b>100.0%</b>              |

Source: CHA analysis of DFW data

**Table 4-18: Distribution of FAA Funded Contract Dollars by Race and Gender  
(total dollars)**

| NAICS        | Black              | Hispanic            | Asian      | Native American | White Women        | DBE                 | Non-DBE             | Total               |
|--------------|--------------------|---------------------|------------|-----------------|--------------------|---------------------|---------------------|---------------------|
| 212312       | \$0                | \$0                 | \$0        | \$0             | \$0                | \$0                 | \$1,276,011         | \$1,276,011         |
| 236220       | \$0                | \$8,595,738         | \$0        | \$0             | \$0                | \$8,595,738         | \$22,917,190        | \$31,512,928        |
| 237310       | \$0                | \$0                 | \$0        | \$0             | \$140,219          | \$140,219           | \$149,472           | \$289,690           |
| 238120       | \$0                | \$0                 | \$0        | \$0             | \$585,814          | \$585,814           | \$278,908           | \$864,722           |
| 238210       | \$4,279,658        | \$500,048           | \$0        | \$0             | \$0                | \$4,779,706         | \$250,172           | \$5,029,878         |
| 238220       | \$0                | \$2,605,916         | \$0        | \$0             | \$223,892          | \$2,829,808         | \$0                 | \$2,829,808         |
| 238910       | \$0                | \$0                 | \$0        | \$0             | \$0                | \$0                 | \$356,094           | \$356,094           |
| 238990       | \$0                | \$0                 | \$0        | \$0             | \$231,874          | \$231,874           | \$0                 | \$231,874           |
| 324121       | \$21,924           | \$0                 | \$0        | \$0             | \$0                | \$21,924            | \$0                 | \$21,924            |
| 327320       | \$0                | \$0                 | \$0        | \$0             | \$712,781          | \$712,781           | \$0                 | \$712,781           |
| 484220       | \$0                | \$215,504           | \$0        | \$0             | \$0                | \$215,504           | \$0                 | \$215,504           |
| 488119       | \$0                | \$0                 | \$0        | \$0             | \$504,415          | \$504,415           | \$0                 | \$504,415           |
| 541330       | \$0                | \$295,174           | \$0        | \$0             | \$0                | \$295,174           | \$8,985,806         | \$9,280,979         |
| 541380       | \$221,599          | \$0                 | \$0        | \$0             | \$0                | \$221,599           | \$0                 | \$221,599           |
| 811412       | \$0                | \$0                 | \$0        | \$0             | \$854,822          | \$854,822           | \$0                 | \$854,822           |
| <b>Total</b> | <b>\$4,523,181</b> | <b>\$12,212,379</b> | <b>\$0</b> | <b>\$0</b>      | <b>\$3,253,816</b> | <b>\$19,989,378</b> | <b>\$34,213,653</b> | <b>\$54,203,029</b> |

Source: CHA analysis of DFW data

**Table 4-19: Distribution of FAA Funded Contract Dollars by Race and Gender  
(share of total dollars)**

| NAICS        | Black       | Hispanic     | Asian       | Native American | White Women | DBE          | Non-DBE      | Total         |
|--------------|-------------|--------------|-------------|-----------------|-------------|--------------|--------------|---------------|
| 212312       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 0.0%        | 0.0%         | 100.0%       | 100.0%        |
| 236220       | 0.0%        | 27.3%        | 0.0%        | 0.0%            | 0.0%        | 27.3%        | 72.7%        | 100.0%        |
| 237310       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 48.4%       | 48.4%        | 51.6%        | 100.0%        |
| 238120       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 67.8%       | 67.8%        | 32.3%        | 100.0%        |
| 238210       | 85.1%       | 9.9%         | 0.0%        | 0.0%            | 0.0%        | 95.0%        | 5.0%         | 100.0%        |
| 238220       | 0.0%        | 92.1%        | 0.0%        | 0.0%            | 7.9%        | 100.0%       | 0.0%         | 100.0%        |
| 238910       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 0.0%        | 0.0%         | 100.0%       | 100.0%        |
| 238990       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 100.0%      | 100.0%       | 0.0%         | 100.0%        |
| 324121       | 100.0%      | 0.0%         | 0.0%        | 0.0%            | 0.0%        | 100.0%       | 0.0%         | 100.0%        |
| 327320       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 100.0%      | 100.0%       | 0.0%         | 100.0%        |
| 484220       | 0.0%        | 100.0%       | 0.0%        | 0.0%            | 0.0%        | 100.0%       | 0.0%         | 100.0%        |
| 488119       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 100.0%      | 100.0%       | 0.0%         | 100.0%        |
| 541330       | 0.0%        | 3.2%         | 0.0%        | 0.0%            | 0.0%        | 3.2%         | 96.8%        | 100.0%        |
| 541380       | 100.0%      | 0.0%         | 0.0%        | 0.0%            | 0.0%        | 100.0%       | 0.0%         | 100.0%        |
| 811412       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 100.0%      | 100.0%       | 0.0%         | 100.0%        |
| <b>Total</b> | <b>8.3%</b> | <b>22.5%</b> | <b>0.0%</b> | <b>0.0%</b>     | <b>6.0%</b> | <b>36.9%</b> | <b>63.1%</b> | <b>100.0%</b> |

Source: CHA analysis of DFW data

#### 4. Availability of D/M/WBEs in DFW’s Markets: FAA Funded Contracts

Similar to the analysis of M/WBE availability for locally-funded contracts, where the constrained product market was shaped by the Airport’s spend for non-FAA funded contracts, we built a database of available firms for the constrained product market shaped by the spending of FAA funded dollars. Tables 4-20 through 4-22 present data on unweighted availability; the weights used to adjust the unweighted numbers; and the weighted availability.

These weighted availability estimates can be used by the Airport to set its goals for FAA funded projects, similar to the process used for non-FAA funded contracts.

**Table 4-20: Unweighted Availability for FAA Funded Contracts**

| NAICS        | Black       | Latino      | Asian       | Native American | White Women | DBE          | Non-DBE      | Total         |
|--------------|-------------|-------------|-------------|-----------------|-------------|--------------|--------------|---------------|
| 212312       | 0.0%        | 0.0%        | 0.0%        | 0.0%            | 8.7%        | 8.7%         | 91.3%        | 100.0%        |
| 236220       | 13.4%       | 10.7%       | 2.9%        | 2.2%            | 10.6%       | 39.8%        | 60.2%        | 100.0%        |
| 237310       | 15.2%       | 14.6%       | 2.3%        | 1.8%            | 10.1%       | 43.9%        | 56.1%        | 100.0%        |
| 238120       | 8.2%        | 19.2%       | 1.7%        | 3.0%            | 11.6%       | 43.8%        | 56.2%        | 100.0%        |
| 238210       | 3.4%        | 4.1%        | 0.8%        | 0.9%            | 7.1%        | 16.4%        | 83.6%        | 100.0%        |
| 238220       | 2.1%        | 1.9%        | 0.1%        | 0.5%            | 4.4%        | 9.1%         | 90.9%        | 100.0%        |
| 238910       | 9.1%        | 11.0%       | 1.7%        | 1.4%            | 11.3%       | 34.4%        | 65.6%        | 100.0%        |
| 238990       | 2.5%        | 2.5%        | 0.4%        | 0.5%            | 5.3%        | 11.2%        | 88.8%        | 100.0%        |
| 324121       | 12.6%       | 26.4%       | 0.4%        | 1.5%            | 9.1%        | 50.0%        | 50.0%        | 100.0%        |
| 327320       | 3.6%        | 2.0%        | 0.0%        | 0.1%            | 11.5%       | 17.2%        | 82.8%        | 100.0%        |
| 484220       | 2.2%        | 3.8%        | 0.2%        | 0.5%            | 3.4%        | 10.0%        | 90.0%        | 100.0%        |
| 488119       | 1.1%        | 1.0%        | 0.1%        | 0.3%            | 3.6%        | 6.0%         | 94.0%        | 100.0%        |
| 541330       | 6.0%        | 6.8%        | 5.0%        | 1.9%            | 9.8%        | 29.5%        | 70.5%        | 100.0%        |
| 541380       | 5.1%        | 3.9%        | 3.4%        | 1.0%            | 15.7%       | 29.1%        | 70.9%        | 100.0%        |
| 811412       | 0.5%        | 0.5%        | 0.1%        | 0.2%            | 5.4%        | 6.8%         | 93.2%        | 100.0%        |
| <b>Total</b> | <b>4.1%</b> | <b>4.5%</b> | <b>1.1%</b> | <b>0.9%</b>     | <b>6.2%</b> | <b>16.8%</b> | <b>83.2%</b> | <b>100.0%</b> |

Source: CHA analysis of DFW data; Hoovers; CHA Master Directory

**Table 4-21: Share of DFW Spending on FAA Funded Contracts by NAICS Code**

| NAICS  | NAICS Code Description   | WEIGHT (Pct Share of Total Sector Dollars) |
|--------|--|--|
| 212312 | Crushed and Broken Limestone Mining and Quarrying                | 2.4%                                       |
| 236220 | Commercial and Institutional Building Construction               | 58.1%                                      |
| 237310 | Highway, Street, and Bridge Construction                         | 0.5%                                       |
| 238120 | Structural Steel and Precast Concrete Contractors                | 1.6%                                       |
| 238210 | Electrical Contractors and Other Wiring Installation Contractors | 9.3%                                       |
| 238220 | Plumbing, Heating, and Air-Conditioning Contractors              | 5.2%                                       |
| 238910 | Site Preparation Contractors                                     | 0.7%                                       |

| NAICS        | NAICS Code Description                                  | WEIGHT (Pct Share of Total Sector Dollars) |
|--------------|---|--|
| 238990       | All Other Specialty Trade Contractors                   | 0.4%                                       |
| 324121       | Asphalt Paving Mixture and Block Manufacturing          | 0.0%                                       |
| 327320       | Ready-Mix Concrete Manufacturing                        | 1.3%                                       |
| 484220       | Specialized Freight (except Used Goods) Trucking, Local | 0.4%                                       |
| 488119       | Other Airport Operations                                | 0.9%                                       |
| 541330       | Engineering Services                                    | 17.1%                                      |
| 541380       | Testing Laboratories                                    | 0.4%                                       |
| 811412       | Appliance Repair and Maintenance                        | 1.6%                                       |
| <b>Total</b> |   | <b>100.0%</b>                              |

Source: CHA analysis of DFW data

**Table 4-22: Aggregated Weighted Availability for FAA Funded Contracts**

| Black | Hispanic | Asian | Native American | White Women | DBE   | Non-DBE | Total  |
|-------|----------|-------|-----------------|-------------|-------|---------|--------|
| 9.6%  | 8.4%     | 2.7%  | 1.8%            | 9.6%        | 32.2% | 67.8%   | 100.0% |

Source: CHA analysis of DFW data; Hoovers; CHA Master Directory

Because Congress has already determined that discrimination operates in the market for federally-funded transportation contracts, local governments located outside the Ninth Circuit Court of Appeals are not to perform a disparity analysis on USDOT-funded contracts. Under 49 C.F.R. Part 26 and Part 23, all that is required is an availability analysis.

## D. DFW’s Non-Car Rental Concession Contracts

49 C.F.R. Part 23 requires the Airport to set separate triennial goals for car rental concession contracts and non-car rental concession contracts. To provide data to the agency to comply with these regulatory requirements, we separately analyzed these data. Non-car rental analyses are below.



## 1. DFW's Unconstrained Product Market for Non-Car Rental Concession Contracts

**Table 4-23: NAICS Code Distribution of Non-Car Rental Concession Contract Dollars**

| NAICS        | NAICS Code Description               | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|--------------------------------------|----------------------------|---------------------------------------|
| 722310       | Food Service Contractors             | 54.3%                      | 54.3%                                 |
| 451212       | News Dealers and Newsstands          | 9.9%                       | 64.2%                                 |
| 523130       | Commodity Contracts Dealing          | 7.5%                       | 71.8%                                 |
| 453220       | Gift, Novelty, and Souvenir Stores   | 7.2%                       | 78.9%                                 |
| 445310       | Beer, Wine, and Liquor Stores        | 4.4%                       | 83.3%                                 |
| 445120       | Convenience Stores                   | 2.4%                       | 85.7%                                 |
| 443142       | Electronics Stores                   | 2.2%                       | 87.9%                                 |
| 722213       | Snack and Nonalcoholic Beverage Bars | 1.4%                       | 89.3%                                 |
| 722110       | Full-Service Restaurants             | 1.1%                       | 90.4%                                 |
| 445292       | Confectionery and Nut Stores         | 1.1%                       | 91.5%                                 |
| <b>TOTAL</b> |                                      |                            | <b>100.0%<sup>a</sup></b>             |

a. Agency spending across an additional 32 NAICS codes comprised 8.5 percent of all spending. A chart of all of these NAICS codes are in Appendix D.

Source: CHA analysis of DFW data

## 2. DFW's Geographic Market for Non-Car Rental Concession Contracts

The State of Texas contained 87.3 percent of all contract dollars for non-car rental concessions. The counties listed in Table 4-24 contained 96.2 percent of the in-state dollars and constitute the geographic market.<sup>188</sup>

188. A breakdown of Non-Car Rental Contracts by Prime and Subcontractor is not provided because the ACDBEs functioned as joint venture partners.

**Table 4-24: Distribution of Contracts in DFW’s Product Market for Non-Car Rental Concession Contracts by County**

| County       | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|----------------------------|---------------------------------------|
| Dallas       | 39.6%                      | 39.6%                                 |
| Tarrant      | 36.4%                      | 76.0%                                 |
| Harris       | 8.6%                       | 84.6%                                 |
| Midland      | 5.4%                       | 90.1%                                 |
| Denton       | 3.1%                       | 93.2%                                 |
| Collin       | 3.0%                       | 96.2%                                 |
| <b>TOTAL</b> |                            | <b>100.0%<sup>a</sup></b>             |

a. Three other counties contained just 3.8 percent of the state spending.

Source: CHA analysis of DFW data

### 3. DFW’s Utilization of ACDBEs on Non-Car Rental Concessions

Tables 4-25 through 4-27 present the Airport’s utilization by contract dollars for non-car rental concessions.

**Table 4-25: NAICS Code Distribution of Non-Car Rental Concession Contract Dollars**

| NAICS        | NAICS Code Description             | Total Contract Dollars | Pct Total Contract Dollars |
|--------------|------------------------------------|------------------------|----------------------------|
| 722110       | Full-Service Restaurants           | \$1,011,306,368        | 63.1%                      |
| 451212       | News Dealers and Newsstands        | \$204,563,440          | 12.8%                      |
| 523130       | Commodity Contracts Dealing        | \$157,242,000          | 9.8%                       |
| 453220       | Gift, Novelty, and Souvenir Stores | \$116,549,680          | 7.3%                       |
| 445120       | Convenience Stores                 | \$45,562,404           | 2.8%                       |
| 445310       | Beer, Wine, and Liquor Stores      | \$43,155,936           | 2.7%                       |
| 445292       | Confectionery and Nut Stores       | \$23,684,400           | 1.5%                       |
| <b>Total</b> |                                    | <b>\$1,602,064,228</b> | <b>100.0%</b>              |

Source: CHA analysis of DFW data

**Table 4-26: Distribution of Non-Car Rental Concession Contract Dollars by Race and Gender  
(total dollars)**

| NAICS        | Black                | Hispanic             | Asian              | Native American | White Women         | ACDBE                | Non-ACDBE            | Total                  |
|--------------|----------------------|----------------------|--------------------|-----------------|---------------------|----------------------|----------------------|------------------------|
| 445120       | \$19,430,141         | \$5,703,435          | \$0                | \$0             | \$0                 | \$25,133,576         | \$20,428,830         | \$45,562,406           |
| 445292       | \$359,351            | \$20,589,677         | \$0                | \$0             | \$0                 | \$20,949,028         | \$2,735,372          | \$23,684,399           |
| 445310       | \$1,834,773          | \$2,639,631          | \$0                | \$0             | \$0                 | \$4,474,404          | \$38,681,532         | \$43,155,936           |
| 451212       | \$41,037,831         | \$62,746,            | \$6,490,342        | \$0             | \$0                 | \$110,275,079        | \$94,288,363         | \$204,563,442          |
| 453220       | \$23,248,683         | \$21,639,327         | \$1,555,116        | \$0             | \$0                 | \$46,443,126         | \$70,106,554         | \$116,549,680          |
| 523130       | \$0                  | \$63,339,715         | \$0                | \$0             | \$0                 | \$63,339,715         | \$93,902,283         | \$157,241,998          |
| 722110       | \$281,060,491        | \$379,058,722        | \$0                | \$0             | \$28,299,807        | \$688,419,020        | \$322,887,341        | \$1,011,306,361        |
| <b>Total</b> | <b>\$366,971,270</b> | <b>\$555,717,413</b> | <b>\$8,045,458</b> | <b>\$0</b>      | <b>\$28,299,807</b> | <b>\$959,033,948</b> | <b>\$643,030,275</b> | <b>\$1,602,064,222</b> |

Source: CHA analysis of DFW data

**Table 4-27: Distribution of Non-Car Rental Concession Contract Dollars by Race and Gender**  
(share of total dollars)

| NAICS        | Black        | Hispanic     | Asian       | Native American | White Women | ACDBE        | Non-ACDBE    | Total         |
|--------------|--------------|--------------|-------------|-----------------|-------------|--------------|--------------|---------------|
| 445120       | 42.7%        | 12.5%        | 0.0%        | 0.0%            | 0.0%        | 55.2%        | 44.8%        | 100.0%        |
| 445292       | 1.5%         | 86.9%        | 0.0%        | 0.0%            | 0.0%        | 88.5%        | 11.6%        | 100.0%        |
| 445310       | 4.3%         | 6.1%         | 0.0%        | 0.0%            | 0.0%        | 10.4%        | 89.6%        | 100.0%        |
| 451212       | 20.1%        | 30.7%        | 3.2%        | 0.0%            | 0.0%        | 53.9%        | 46.1%        | 100.0%        |
| 453220       | 20.0%        | 18.6%        | 1.3%        | 0.0%            | 0.0%        | 39.9%        | 60.2%        | 100.0%        |
| 523130       | 0.0%         | 40.3%        | 0.0%        | 0.0%            | 0.0%        | 40.3%        | 59.7%        | 100.0%        |
| 722110       | 27.8%        | 37.5%        | 0.0%        | 0.0%            | 2.8%        | 68.1%        | 31.9%        | 100.0%        |
| <b>Total</b> | <b>22.9%</b> | <b>34.7%</b> | <b>0.5%</b> | <b>0.0%</b>     | <b>1.8%</b> | <b>59.9%</b> | <b>40.1%</b> | <b>100.0%</b> |

Source: CHA analysis of DFW data

#### 4. Availability of ACDBEs in DFW’s Markets for Non-Car Rental Concessions

As with the other analyses in this chapter, we built a database of available firms for the constrained product market shaped by the Airport’s dollars spent on non-car rental concessions. Tables 4-28 through 4-30 present data on unweighted availability; the weights used to adjust the unweighted numbers; and the weighted availability. These weighted availability estimates can be used by DFW to set its ACDBE goals for non-car rental concession contracts.

**Table 4-28: Unweighted Availability for Non-Car Rental Concession Contracts**

| NAICS        | Black       | Latino      | Asian       | Native American | White Women | ACDBE       | Non-ACDBE    | Total         |
|--------------|-------------|-------------|-------------|-----------------|-------------|-------------|--------------|---------------|
| 445120       | 35.9%       | 17.4%       | 17.4%       | 0.8%            | 0.0%        | 71.4%       | 28.6%        | 100.0%        |
| 445292       | 1.2%        | 0.9%        | 0.6%        | 0.1%            | 7.5%        | 10.3%       | 89.7%        | 100.0%        |
| 445310       | 0.5%        | 0.3%        | 0.3%        | 0.0%            | 4.3%        | 5.4%        | 94.6%        | 100.0%        |
| 451212       | 15.1%       | 12.1%       | 5.5%        | 0.1%            | 3.9%        | 36.8%       | 63.2%        | 100.0%        |
| 453220       | 1.0%        | 0.6%        | 0.4%        | 0.0%            | 13.4%       | 15.5%       | 84.5%        | 100.0%        |
| 523130       | 14.3%       | 42.9%       | 14.3%       | 0.0%            | 0.0%        | 71.4%       | 28.6%        | 100.0%        |
| 722310       | 0.6%        | 0.3%        | 0.2%        | 0.0%            | 3.3%        | 4.4%        | 95.6%        | 100.0%        |
| <b>Total</b> | <b>0.6%</b> | <b>0.4%</b> | <b>0.2%</b> | <b>0.0%</b>     | <b>4.2%</b> | <b>5.5%</b> | <b>94.5%</b> | <b>100.0%</b> |

Source: CHA analysis of DFW data; Hoovers; CHA Master Directory

**Table 4-29: Share of DFW Spending on Non-Car Rental Concession Contracts by NAICS Code**

| NAICS        | NAICS Code Description             | WEIGHT (Pct Share of Total Sector Dollars) |
|--------------|------------------------------------|--|
| 445120       | Convenience Stores                 | 2.8%                                       |
| 445292       | Confectionery and Nut Stores       | 1.5%                                       |
| 445310       | Beer, Wine, and Liquor Stores      | 2.7%                                       |
| 451212       | News Dealers and Newsstands        | 12.8%                                      |
| 453220       | Gift, Novelty, and Souvenir Stores | 7.3%                                       |
| 523130       | Commodity Contracts Dealing        | 9.8%                                       |
| 722110       | Full-Service Restaurants           | 63.1%                                      |
| <b>Total</b> |                                    | <b>100.0%</b>                              |

Source: CHA analysis of DFW data

**Table 4-30: Aggregated Weighted Availability for Non-Car Rental Concession Contracts (total dollars)**

| Black | Hispanic | Asian | Native American | White Women | ACDBE | Non-ACDBE | Total  |
|-------|----------|-------|-----------------|-------------|-------|-----------|--------|
| 4.8%  | 6.5%     | 2.8%  | 0.1%            | 3.8%        | 18.0% | 82.0%     | 100.0% |

Source: CHA analysis of DFW data; Hoovers; CHA Master Directory

## E. DFW’s Car Rental Concession Contracts

### 1. DFW’s Unconstrained Product Market for Car Rental Concession Contracts

Two NAICS codes—New Car Dealers 441110 and Passenger Car Rental 532111—captured 99.4 percent of all of the Airport’s spend on car rental concessions. These two NAICS codes represent the unconstrained product market and Table 4-31 presents this data.

**Table 4-31: NAICS Code Distribution of Car Rental Concession Contract Dollars**

| NAICS        | NAICS Code Description | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|------------------------|----------------------------|---------------------------------------|
| 532111       | Passenger Car Rental   | 86.5%                      | 86.5%                                 |
| 441110       | New Car Dealers        | 12.9%                      | 99.4%                                 |
| <b>TOTAL</b> |                        |                            | <b>100.0%</b>                         |

Source: CHA analysis of DFW data

### 2. DFW’s Geographic Market for Car Rental Concession Contracts

Tarrant County (TX) and Los Angeles County (CA) capture 96.5 percent of unconstrained product market and will define the geographic market for this study. Table 4-32 presents this data.

**Table 4-32: Distribution of Contracts in DFW’s Product Market for Car Rental Concession Contracts in Tarrant and Los Angeles Counties**

| County      | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|-------------|----------------------------|---------------------------------------|
| Tarrant     | 85.8%                      | 85.8%                                 |
| Los Angeles | 10.7%                      | 96.5%                                 |

Source: CHA analysis of DFW data

### 3. DFW’s Utilization of ACDBEs on Car Rental Concessions

Tables 4-33 through 4-35 present the Airport’s utilization by contract dollars for car rental concessions.

**Table 4-33: NAICS Code Distribution of Car Rental Concession Contract Dollars**

| NAICS        | NAICS Code Description | Total Contract Dollars    | Pct Total Contract Dollars |
|--------------|------------------------|---------------------------|----------------------------|
| 532111       | Passenger Car Rental   | \$1,295,494,228.06        | 88.9%                      |
| 441110       | New Car Dealers        | \$161,089,526.88          | 11.1%                      |
| <b>Total</b> |                        | <b>\$1,456,583,754.94</b> | <b>100.0%</b>              |

Source: CHA analysis of DFW data

**Table 4-34: Distribution of Car Rental Concession Contract Dollars by Race and Gender (total dollars)**

| NAICS        | Black      | Hispanic             | Asian      | Native American | White Women | ACDBE                | Non-ACDBE              | Total                  |
|--------------|------------|----------------------|------------|-----------------|-------------|----------------------|------------------------|------------------------|
| 441110       | \$0        | \$161,089,527        | \$0        | \$0             | \$0         | \$161,089,527        | \$0                    | \$161,089,527          |
| 532111       | \$0        | \$0                  | \$0        | \$0             | \$0         | \$0                  | \$1,295,494,228        | \$1,295,494,228        |
| <b>Total</b> | <b>\$0</b> | <b>\$161,089,527</b> | <b>\$0</b> | <b>\$0</b>      | <b>\$0</b>  | <b>\$161,089,527</b> | <b>\$1,295,494,228</b> | <b>\$1,456,583,755</b> |

Source: CHA analysis of DFW data

**Table 4-35: Distribution of Car Rental Concession Contract Dollars by Race and Gender (share of total dollars)**

| NAICS        | Black       | Hispanic     | Asian       | Native American | White Women | ACDBE        | Non-ACDBE    | Total         |
|--------------|-------------|--------------|-------------|-----------------|-------------|--------------|--------------|---------------|
| 441110       | 0.0%        | 100.0%       | 0.0%        | 0.0%            | 0.0%        | 100.0%       | 0.0%         | 100.0%        |
| 532111       | 0.0%        | 0.0%         | 0.0%        | 0.0%            | 0.0%        | 0.0%         | 100.0%       | 100.0%        |
| <b>Total</b> | <b>0.0%</b> | <b>11.1%</b> | <b>0.0%</b> | <b>0.0%</b>     | <b>0.0%</b> | <b>11.1%</b> | <b>88.9%</b> | <b>100.0%</b> |

Source: CHA analysis of DFW data

#### 4. Availability of ACDBEs in DFW’s Markets for Car Rental Concession Contracts

Similar to the analysis of D/M/WBE availability in the constrained product market shaped by the spending of FAA and non-FAA funded dollars, we built a database of available firms in the car rental concessions market. Tables 4-36 through 4-38 present data on the weighted availability; the weights used to adjust the unweighted numbers; and the weighted availability.

These weighted availability estimates can be used by the Airport to set its ACDBE goals for car rental concession contracts.

**Table 4-36: Unweighted Availability for Car Rental Concession Contracts**

| NAICS        | Black       | Latino      | Asian       | Native American | White Women | ACDBE       | Non-ACDBE    | Total         |
|--------------|-------------|-------------|-------------|-----------------|-------------|-------------|--------------|---------------|
| 441110       | 0.5%        | 0.4%        | 0.2%        | 0.0%            | 2.0%        | 3.1%        | 96.9%        | 100.0%        |
| 532111       | 0.5%        | 0.3%        | 0.2%        | 0.0%            | 2.2%        | 3.1%        | 96.9%        | 100.0%        |
| <b>TOTAL</b> | <b>0.5%</b> | <b>0.4%</b> | <b>0.2%</b> | <b>0.0%</b>     | <b>2.0%</b> | <b>3.1%</b> | <b>96.9%</b> | <b>100.0%</b> |

Source: CHA analysis of DFW data; Hoovers; CHA Master Directory

**Table 4-37: Share of DFW Spending on Car Rental Concession Contracts by NAICS Code**

| NAICS        | NAICS Code Description | WEIGHT (Pct Share of Total Sector Dollars) |
|--------------|------------------------|--|
| 532111       | Passenger Car Rental   | 88.9%                                      |
| 441110       | New Car Dealers        | 11.1%                                      |
| <b>Total</b> |                        | <b>100.0%</b>                              |

Source: CHA analysis of DFW data

**Table 4-38: Aggregated Weighted Availability for Car Rental Concession Contracts (total dollars)**

| Black | Hispanic | Asian | Native American | White Women | ACDBE | Non-ACDBE | Total  |
|-------|----------|-------|-----------------|-------------|-------|-----------|--------|
| 0.5%  | 0.3%     | 0.2%  | 0.0%            | 2.2%        | 3.1%  | 96.9%     | 100.0% |

Source: CHA analysis of DFW data; Hoovers; CHA Master Directory



# V. ANALYSIS OF ECONOMY-WIDE DISPARITIES IN DALLAS FORT WORTH INTERNATIONAL AIRPORT'S MARKET

## A. Introduction

The late Nobel Prize Laureate Kenneth Arrow, in his seminal paper on the economic analysis of discrimination, observed:

Racial discrimination pervades every aspect of a society in which it is found. It is found above all in attitudes of both races, but also in social relations, in intermarriage, in residential location, and frequently in legal barriers. It is also found in levels of economic accomplishment; this is income, wages, prices paid, and credit extended.<sup>189</sup>

This Chapter explores the data and literature relevant to how discrimination in Dallas Fort Worth International Airport's ("DFW" or "Airport") market and throughout the wider economy affects the ability of minorities and women to fairly and fully engage in the Airport's contract opportunities. First, we analyzed the rates at which M/WBEs in the Dallas-Fort Worth metropolitan area<sup>190</sup> form firms and their earnings from those firms. Next, we looked at the number of sales and receipts, number of employees and payroll for M/WBE firms in the State of Texas. Then, we summarized the literature on barriers to equal access to commercial credit. Finally, we summarized the literature on barriers to equal access to human capital. All three types of evidence have been found by the courts to be relevant and probative of whether a government will be a passive participant in discrimination without some type of affirmative interventions.

A key element to determine the need for government intervention through contract goals in the sectors of the economy where the Airport procures goods and services is an analysis of the extent of disparities in those sectors independent of the agency's intervention through its contracting affirmative action programs.

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189. Arrow, Kenneth J., "What Has Economics to say about racial discrimination?" *Journal of Economic Perspectives*, (1998), 12(2), pp. 91-100.

190. The Dallas-Fort Worth metropolitan area encompassed the counties of Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, and Tarrant.

The courts have repeatedly held that analysis of disparities in the rates at which M/WBEs in the government's markets form businesses compared to similar non-M/WBEs, their earnings from such businesses, and their access to capital markets are highly relevant to the determination of whether the market functions properly for all firms regardless of the race or gender of their ownership.<sup>191</sup> These analyses contributed most recently to the successful defense of the Illinois Tollway's Disadvantaged Business Enterprise (DBE) Program.<sup>192</sup> As explained by the Tenth Circuit in upholding the U.S. Department of Transportation's DBE program, this type of evidence

demonstrates the existence of two kinds of discriminatory barriers to minority subcontracting enterprises, both of which show a strong link between racial disparities in the federal government's disbursements of public funds for construction contracts and the channeling of those funds due to private discrimination. The first discriminatory barriers are to the formation of qualified minority subcontracting enterprises due to private discrimination, precluding from the outset competition for public construction contracts by minority enterprises. The second discriminatory barriers are to fair competition between minority and non-minority subcontracting enterprises, again due to private discrimination, precluding existing minority firms from effectively competing for public construction contracts. The government also presents further evidence in the form of local disparity studies of minority subcontracting and studies of local subcontracting markets after the removal of affirmative action programs... The government's evidence is particularly striking in the area of the race-based denial of access to capital, without which the formation of minority subcontracting enterprises is stymied.<sup>193</sup>

Business discrimination studies and lending studies are relevant and probative because they show a strong link between the disbursement of public funds and the channeling of those funds due to private discrimination.

"Evidence that private discrimination results in barriers to business formation is relevant because it demonstrates that M/WBEs are precluded *at the outset* from competing for public construction contracts. Evidence of barriers to fair competi-

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191. See the discussion in Chapter II of the legal standards applicable to contracting affirmative action programs.

192. *Midwest Fence Corp. v. Illinois Department of Transportation, Illinois State Toll Highway Authority et al*, 840 F.3d 942 (7<sup>th</sup> Cir. 2016) (upholding the Illinois Tollway's program for state funded contracts modeled after Part 26 and based on CHA's expert testimony, including about disparities in the overall Illinois construction industry); *see also Builders Association of Greater Chicago v. City of Chicago*, 298 F.Supp.2d 725 (N.D. Ill. 2003) (holding that the City of Chicago's M/WBE program for local construction contracts met the compelling interest prong using this framework).

193. *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1168-1169 (10<sup>th</sup> Cir. 2000), *cert. granted*, 532 U.S. 941, *then dismissed as improvidently granted*, 534 U.S. 103 (2001) ("*Adarand VII*").

tion is also relevant because it again demonstrates that *existing* M/WBEs are precluded from competing for public contracts.”<sup>194</sup>

Despite the contentions of plaintiffs that possibly dozens of factors might influence the ability of any individual to succeed in business, the courts have rejected such impossible tests and held that business formation studies are not flawed because they cannot control for subjective descriptions such as “quality of education”, “culture” and “religion”.

For example, in unanimously upholding the USDOT DBE program, the courts agree that disparities between the earnings of minority-owned firms and similarly situated non-minority owned firms and the disparities in commercial loan denial rates between Black business owners compared to similarly situated non-minority business owners are strong evidence of the continuing effects of discrimination.<sup>195</sup> The Eighth Circuit Court of Appeals took a “hard look” at the evidence Congress considered, and concluded that the legislature had

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. In rebuttal, [the plaintiffs] presented evidence that the data were susceptible to multiple interpretations, but they failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.<sup>196</sup>

Likewise, in holding that the DBE program regulations meet strict scrutiny, the court in the *Western States* opinion relied on the “substantial body of statistical and anecdotal materials” considered by Congress, including studies based on Census data that provide “ample” evidence of barriers to the formation of minority-owned firms in the transportation contracting industry.<sup>197</sup>

This type of court-approved analysis is especially important for an agency such as the Airport, which has been implementing M/WBE, DBE and ACDBE programs for many years. DFW’s remedial market interventions through the use of contract

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194. *Id.*

195. *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2005 U.S. Dist. LEXIS 19868, at \*64 (Sept. 8, 2005).

196. *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d 964, 970 (8th Cir. 2003), *cert. denied*, 541 U.S. 1041 (2004); *see also Adarand VII*, 228 F.3d at 1175 (plaintiff has not met its burden “of introducing credible, particularized evidence to rebut the government’s initial showing of the existence of a compelling interest in remedying the nationwide effects of past and present discrimination in the federal construction procurement subcontracting market.”).

197. *Western States Paving Co., Inc. v. Department of Transportation*, 407 F.3d 983, 993 (9<sup>th</sup> Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).

goals may ameliorate the disparate impacts of marketplace discrimination in the agency's own contracting activities. Put another way, the program's success in moving towards parity for minority and women firms may be "masking" the effects of discrimination that otherwise would result in disparities in M/WBE utilization that mirror that of the overall economy.

To explore the question whether firms owned by Non-Whites and White Women face disparate treatment in the Airport's marketplace outside of Airport contracts, we examined the U.S. Bureau of the Census' *American Community Survey* which allows us to examine disparities using individual entrepreneurs as the basic unit of analysis.<sup>198</sup> We used the nine-county Dallas Fort Worth metropolitan area as the geographic unit of analysis.

We found disparities in wages, business earnings and business formation rates for minorities and women in all industry sectors in DFW's marketplace.

## **B. Disparate Treatment in the Marketplace: Evidence from the Census Bureau's 2012 - 2016 American Community Survey**

As discussed in the beginning of this Chapter, the key question is whether firms owned by Non-Whites and White Women face disparate treatment in the marketplace without the intervention of the Airport's programs. In this section, we explore this and other aspects of this question using the Census Bureau's *American Community Survey* data. One element asks if demographic differences exist in the wage and salary income received by private sector workers. Beyond the issue of bias in the incomes generated in the private sector, this exploration is important for the issue of possible variations in the rate of business formation by different demographic groups. One of the determinants of business formation is the pool of financial capital at the disposal of the prospective entrepreneur. The size of this pool is related to the income level of the individual either because the income level impacts the amount of personal savings that can be used for start-up capital or the income level affects one's ability to borrow funds. Consequently, if particular demographic groups receive lower wages and salaries, then they would have access to a smaller pool of financial capital, and thus reduce the likelihood of business formation.

The *American Community Survey* ("ACS") *Public Use Microdata Sample* ("PUMS") is useful in addressing these issues. The ACS is an annual survey of one percent of the population and the PUMS provides detailed information at the individual level. In order to obtain robust results from our analysis, we used the file that combines

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198. Data from 2012 - 2016 American Community Survey are the most recent for a five-year period.

the most recent data available for the years 2012 through 2016.<sup>199</sup> With this rich data set, our analysis can establish with greater certainty any causal links between race, gender and economic outcomes.

Often, the general public sees clear associations between race, gender, and economic outcomes and assumes this association reflects a tight causal connection. However, economic outcomes are determined by a broad set of factors, including and extending beyond, race and gender. To provide a simple example, two people who differ by race or gender may receive different wages. This difference may simply reflect that the individuals work in different industries. If this underlying difference is not known, one might assert the wage differential is the result of race or gender difference. To better understand the impact of race or gender on wages, it is important to compare individuals of different races or genders who work in the same industry. Of course, wages are determined by a broad set of factors beyond race, gender, and industry. With the ACS PUMS, we have the ability to include a wide range of additional variables such as age, education, occupation, and state of residence in the analysis.

We employ a multiple regression statistical technique to process this data. This methodology allows us to obtain two results: an estimation of how variations in certain characteristics (called independent variables) will impact the level of some particular outcome (called a dependent variable), and a determination of how confident we are that the estimated variation is statistically different from zero. We have provided more detail on this technique in Appendix A.

With respect to the first step of the regression analysis, we will examine how variations in the race, gender, and industry of individuals impact the wages and other economic outcomes received by individuals. The technique allows us to determine the effect of changes in one variable, assuming that the other determining variables are the same. That is, we compare individuals of different races, but of the same gender and in the same industry; or we compare individuals of different genders, but of the same race and the same industry; or we compare individuals in different industries, but of the same race and gender. We are determining the impact of changes in one variable (*e.g.*, race, gender or industry) on another variable (wages), “controlling for” the movement of any other independent variables.

With respect to the second step of the regression analysis, we will determine the statistical significance of the relationship between the dependent variable and independent variable. For example, the relationship between gender and wages might exist, but we find that it is not statistically different from zero. In this case, we are not confident that there is any relationship between the two variables. If the relationship is not statistically different from zero, then a variation in the independent variable has no impact on the dependent variable. The regression analy-

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199. For more information about the ACS PUMS, see <http://www.census.gov/acs/>.

sis allows us to say with varying degrees of statistical confidence that a relationship is different from zero. If the estimated relationship is statistically significant at the 0.05 level, that indicates we are 95 percent confident that the relationship is different from zero; if the estimated relationship is statistically significant at the 0.01 level, that indicates we are 99 percent confident that the relationship is different from zero; if the estimated relationship is statistically significant at the 0.001 level, that indicates we are 99.9 percent confident that the relationship is different from zero.<sup>200</sup>

In the following presentation of results, each sub-section first reports data on the share of a demographic group that forms a business (business formation rates); the probabilities that a demographic group will form a business relative to White men (business formation probabilities); the differences in wages received by a demographic group relative to White men (wage differentials); and the differences in business earnings received by a demographic group relative to White men (business earnings differentials).

## **1. All Industries Combined in the Dallas Fort Worth Metropolitan Area**

One method of exploring differences in economic outcomes is to examine the rate at which different demographic groups form businesses. We developed these business formation rates using data from the U.S. Bureau of the Census' *American Community Survey*. Table 5-1 presents these results. The table indicates that White men have higher business formation rates compared to Non-Whites and White Women. Table 5-2 utilizes probit regression analysis to examine the probability of forming a business after controlling for important factors beyond race and gender.<sup>201</sup> This table indicates that Non-Whites (except for Asian/Pacific Islanders) and White Women are less likely to form businesses compared to similarly situated White men. The reduced probabilities of business formation ranged from 3.1 percent for Blacks to 0.7 percent for Others. These results were statistically significant at the 0.001 level for each variable except for Native American and Other. Another way to measure equity is to examine how the wage and salary incomes and business earnings of particular demographic groups compare to White men. Multiple regression statistical techniques allowed us to examine the impact of race and gender on economic outcomes while controlling for other factors, such as education and age.<sup>202</sup> Tables 5-3 and 5-4 present this data on wage and salary incomes and business earnings respectively. Table 5-3 indicates that Non-whites and White

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200. Most social scientists do not endorse utilizing a confidence level of less than 95 percent. Appendix C explains more about statistical significance.

201. Appendix B provides a "Further Explanation of Probit Regression Analysis."

202. See Appendix A for more information on multiple regression statistical analysis.

women earn less than White men. The reduction in earnings range from 36.6 percent to 19.9 percent and all of the results are statistically significant at the 0.001 level. Table 5-4 indicates that except for Asian/Pacific Islanders, Non-whites and White women receive business earnings less than White men. The reduction in earnings range from 223.0 percent to 17.4 percent.<sup>203</sup>

**Table 5-1: Business Formation Rates**  
**All Industries, 2012 - 2016<sup>204</sup>**

| Demographic Group      | Business Formation Rates |
|------------------------|--------------------------|
| Black                  | 1.7%                     |
| Hispanic               | 1.8%                     |
| Native American        | 3.6%                     |
| Asian/Pacific Islander | 5.3%                     |
| Other                  | 3.3%                     |
| White Women            | 3.1%                     |
| Non-White Male         | 2.5%                     |
| White Male             | 5.6%                     |

Source: CHA calculations from the American Community Survey

**Table 5-2: Business Formation Probabilities Relative to White Males**  
**All Industries, 2012 - 2016**

| Demographic Group      | Probability of Forming a Business Relative to White Men |
|------------------------|---|
| Black                  | -3.1%***  |
| Hispanic               | -2.5%***  |
| Native American        | -0.8%   |
| Asian/Pacific Islander | 0.1%  |
| Other                  | -0.7%   |
| White Women            | -2.1%***  |

Source: CHA calculations from the American Community Survey

\*\*\* Indicates statistical significance at the 0.001 level

203. The proper way to interpret a coefficient that is less than negative 100 percent (e.g., the value of the coefficient for Other in Table 5-4), is the percentage amount non-M/WBEs earn that is more than the group in question. In this case, non-M/WBEs earn 223 percent more than Others.

204. Statistical significance tests were not conducted on basic business formation rates.

**Table 5-3: Wage Differentials for Selected Groups Relative to White Men  
All Industries, 2012 - 2016**

| Demographic Group      | Wages Relative to White Men (% Change) |
|------------------------|--|
| Black                  | -36.6%***                              |
| Hispanic               | -19.9%***                              |
| Native American        | -36.3%***                              |
| Asian/Pacific Islander | -34.9%***                              |
| Other                  | -29.9%***                              |
| White Women            | -32.4%***                              |

Source: CHA calculations from the American Community Survey  
\*\*\* Indicates statistical significance at the 0.001 level

**Table 5-4: Business Earnings Differentials for Selected Groups Relative to White Men  
All Industries**

| Demographic Group      | Earnings Relative to White Men (% Change) |
|------------------------|---|
| Black                  | -81.5%***                                 |
| Hispanic               | -29.5%                                    |
| Native American        | -17.4%                                    |
| Asian/Pacific Islander | 27.2%                                     |
| Other                  | -223.0%*                                  |
| White Women            | -50.1%***                                 |

Source: CHA calculations from the American Community Survey  
\*\*\* Indicates statistical significance at the 0.001 level  
\* Indicates statistical significance at the 0.05 level

## 2. The Construction Industry in the Dallas Fort Worth Metropolitan Area

Table 5-5 indicates that White men have higher business formation rates compared to Non-Whites (except for Other) and White Women. Table 5-6 indicates that Non-Whites (except for Asian/Pacific Islanders and Others) and White Women are less likely to form businesses compared to similarly situated White men. The reduced probabilities of business formation ranged from 9.1



percent to 2.8 percent. Table 5-7 indicates that Non-whites and White women earn less than White men. The statistically significant reductions in earnings range from 8.2 percent to 58.5 percent. Table 5-8 indicates that only the business coefficient for Asian/Pacific Islanders was statistically significant.

**Table 5-5: Business Formation Rates  
Construction, 2012 - 2016**

| Demographic Group      | Business Formation Rates |
|------------------------|--------------------------|
| Black                  | 4.6%                     |
| Hispanic               | 3.0%                     |
| Native American        | 2.7%                     |
| Asian/Pacific Islander | 11.3%                    |
| Other                  | 27.8%                    |
| White Women            | 9.0%                     |
| Non-White Male         | 3.8%                     |
| White Male             | 12.3%                    |

Source: CHA calculations from the American Community Survey

**Table 5-6: Business Formation Probability Differentials for Selected Groups  
Relative to White Men, Construction, 2012 - 2016**

| Demographic Group      | Probability of Forming a Business Relative to White Men |
|------------------------|---|
| Black                  | -5.4% <sup>***</sup>                                    |
| Hispanic               | -5.8% <sup>***</sup>                                    |
| Native American        | -9.1% <sup>*</sup>                                      |
| Asian/Pacific Islander | 1.4%  |
| Other                  | 6.3%  |
| White Women            | -2.8%   |

Source: CHA calculations from the American Community Survey

<sup>\*\*\*</sup> Indicates statistical significance at the 0.001 level

<sup>\*</sup> Indicates statistical significance at the 0.05 level

**Table 5-7: Wage Differentials for Selected Groups Relative to White Men  
Construction, 2012 - 2016**

| Demographic Group      | Wages Relative to White Men (% Change) |
|------------------------|--|
| Black                  | -30.1%***                              |
| Hispanic               | -8.2%***                               |
| Native American        | -58.5%**                               |
| Asian/Pacific Islander | -28.5%**                               |
| Other                  | -4.9%                                  |
| White Women            | -15.4%**                               |

Source: CHA calculations from the American Community Survey

\*\*\* Indicates statistical significance at the 0.001 level

\*\* Indicates statistical significance at the 0.01 level

**Table 5-8: Business Earnings Differentials for Selected Groups  
Relative to White Men, Construction, 2012 - 2016**

| Demographic Group      | Earnings Relative to White Men (% Change) |
|------------------------|---|
| Black                  | 21.4%                                     |
| Hispanic               | 21.9%                                     |
| Native American        | ---- <sup>a</sup>                         |
| Asian/Pacific Islander | -31.7%*                                   |
| Other                  | ----                                      |
| White Women            | 18.3%                                     |

a. Many times, there were not sufficient observations in the data to conduct a reliable statistical analysis. In these instances, the tables will contain the symbol “----”. There were only 25 observations for Native Americans and 9 for Others.

Source: CHA calculations from the American Community Survey

\* Indicates statistical significance at the 0.05 level

### 3. The Construction-Related Services Industry in the Dallas Fort Worth Metropolitan Area

There were only three business observations for Native Americans and Others, which impacted our ability to analyze firm activity for these groups. Table 5-9 indicates that White men have higher business formation rates compared to Non-Whites and White Women. Table 5-10 indicates that Non-Whites and White Women are less likely to form businesses compared to similarly situated White men. Table 5-11 indicates that Non-whites (except for Native Americans) and White women earn less than White men.<sup>205</sup> Table 5-12 indicates that none of the coefficients for business earnings were statistically significant.

**Table 5-9: Business Formation Rates, Construction-Related Services  
2012 - 2016**

| Demographic Group      | Business Formation Rates |
|------------------------|--------------------------|
| Black                  | 5.4%                     |
| Hispanic               | 2.9%                     |
| Native American        | -----                    |
| Asian/Pacific Islander | 1.6%                     |
| Other                  | -----                    |
| White Women            | 2.9%                     |
| Non-White Male         | 2.9%                     |
| White Male             | 7.8%                     |

Source: CHA calculations from the American Community Survey

**Table 5-10: Business Formation Probability Differentials for Selected Groups  
Relative to White Men, Construction-related Services, 2012 -  
2016**

| Demographic Group | Probability of Forming a Business Relative to White Men |
|-------------------|---|
| Black             | -1.3%   |
| Hispanic          | -1.7%   |
| Native American   | -----   |

205. We could not analyze the business activity for Native Americans and Others due to the limited number of observations. This limitation does not apply to the analysis in Table 5-11 because this analysis is based on individuals who receive salary and wage income which is a larger number than the individuals who own businesses.

| Demographic Group      | Probability of Forming a Business Relative to White Men |
|------------------------|---|
| Asian/Pacific Islander | -6.7%   |
| Other                  | -----   |
| White Women            | -3.2%   |

Source: CHA calculations from the American Community Survey

**Table 5-11: Wage Differentials for Selected Groups Relative to White Men  
Construction-Related Services, 2012 - 2016**

| Demographic Group      | Wages Relative to White Men (% Change) |
|------------------------|--|
| Black                  | -7.4%                                  |
| Hispanic               | -7.1%                                  |
| Native American        | 6.3%                                   |
| Asian/Pacific Islander | -15.1%*                                |
| Other                  | -16.8%                                 |
| White Women            | -30.5%***                              |

Source: CHA calculations from the American Community Survey

\*\*\* Indicates statistical significance at the 0.001 level

\* Indicates statistical significance at the 0.05 level

**Table 5-12: Business Earnings Differentials for Selected Groups Relative to White Men**

**Construction-related Services, 2012 - 2016**

| Demographic Group      | Earnings Relative to White Men (% Change) |
|------------------------|---|
| Black                  | -182.0%                                   |
| Hispanic               | -797.0%                                   |
| Native American        | -----                                     |
| Asian/Pacific Islander | -82.2%                                    |
| Other                  | -----                                     |
| White Women            | -22.3%                                    |

Source: CHA calculations from the American Community Survey

#### 4. The Goods Industry in Dallas Fort Worth Metropolitan Area

There were only 18 business observations for the Others demographic group. Table 5-13 indicates that White men have higher business formation rates except Asian/Pacific Islanders and Native Americans. Table 5-14 indicates that only one result is statistically significant (Asian/Pacific Islander). Table 5-15 indicates that statistically significant results are found for four groups (Black; Hispanic; Asian/Pacific Islanders; and White Women) and all indicate lower wages relative to White men. Table 5-16 indicates that none of the coefficients for business earnings were statistically significant.

**Table 5-13: Business Formation Rates  
Goods, 2012 - 2016**

| Demographic Group      | Business Formation Rates |
|------------------------|--------------------------|
| Black                  | 1.6%                     |
| Hispanic               | 0.9%                     |
| Native American        | 4.1%                     |
| Asian/Pacific Islander | 6.7%                     |
| Other                  | 0.0%                     |
| White Women            | 2.4%                     |
| Non-White Male         | 2.0%                     |
| White Male             | 3.8%                     |

Source: CHA calculations from the American Community Survey

**Table 5-14: Business Formation Probabilities Relative to White Males  
Goods, 2012 - 2016**

| Demographic Group      | Probability of Forming a Business Relative to White Men |
|------------------------|---|
| Black                  | -1.2%   |
| Hispanic               | -1.6%   |
| Native American        | 2.0%  |
| Asian/Pacific Islander | 3.5%*   |
| Other                  | -----   |
| White Women            | -0.8%   |

Source: CHA calculations from the American Community Survey

\* Indicates statistical significance at the 0.05 level

**Table 5-15: Wage Differentials for Selected Groups Relative to White Men  
Goods, 2012 - 2016**

| Demographic Group      | Wages Relative to White Men (% Change) |
|------------------------|--|
| Black                  | -33.4%***                              |
| Hispanic               | -22.5%***                              |
| Native American        | -20.7%                                 |
| Asian/Pacific Islander | -45.2%***                              |
| Other                  | 16.8%                                  |
| White Women            | -38.0%***                              |

Source: CHA calculations from the American Community Survey  
\*\*\* Indicates statistical significance at the 0.001 level

**Table 5-16: Business Earnings Differentials for Selected Groups Relative to  
White Men  
Goods, 2012 - 2016**

| Demographic Group      | Earnings Relative to White Men (% Change) |
|------------------------|---|
| Black                  | 55.4%                                     |
| Hispanic               | 95.4%                                     |
| Native American        | -----                                     |
| Asian/Pacific Islander | -3.8%                                     |
| Other                  | -----                                     |
| White Women            | -14.3%                                    |

Source: CHA calculations from the American Community Survey

## 5. The Services Industry in Dallas Fort Worth Metropolitan Area

Table 5-17 indicates that White men have higher business formation rates compared to Non-Whites and White Women. Table 5-18 indicates that Non-Whites and White Women are less likely to form businesses compared to similarly situated White men and three of the coefficients are statistically significant. Table 5-19 indicates that Non-whites and White women earn less than White men. Table 5-20 indicates that business earnings for Non-whites and White women are less than White men; three of the coefficients are statistically significant.

**Table 5-17: Business Formation Rates  
Services, 2012 - 2016**

| Demographic Group      | Business Formation Rates |
|------------------------|--------------------------|
| Black                  | 1.9%                     |
| Hispanic               | 1.8%                     |
| Native American        | 5.5%                     |
| Asian/Pacific Islander | 5.5%                     |
| Other                  | 4.0%                     |
| White Women            | 4.0%                     |
| Non-White Male         | 3.0%                     |
| White Male             | 7.1%                     |

Source: CHA calculations from the American Community Survey

**Table 5-18: Business Formation Probability Differentials for Selected Groups  
Relative to White Men, Services, 2012 - 2016**

| Demographic Group      | Probability of Forming a Business Relative to White Men |
|------------------------|---|
| Black                  | -3.8% <sup>***</sup>                                    |
| Hispanic               | -2.7% <sup>***</sup>                                    |
| Native American        | -0.2%   |
| Asian/Pacific Islander | -1.2% <sup>*</sup>                                      |
| Other                  | -0.3%   |
| White Women            | -2.4% <sup>***</sup>                                    |

Source: CHA calculations from the American Community Survey

<sup>\*\*\*</sup> Indicates statistical significance at the 0.001 level

<sup>\*</sup> Indicates statistical significance at the 0.05 level

**Table 5-19: Wage Differentials for Selected Groups Relative to White Men  
Services, 2012 - 2016**

| Demographic Group | Wages Relative to White Men (% Change) |
|-------------------|--|
| Black             | -35.6% <sup>***</sup>                  |
| Hispanic          | -19.4% <sup>***</sup>                  |
| Native American   | -37.8% <sup>***</sup>                  |

| Demographic Group      | Wages Relative to White Men (% Change) |
|------------------------|--|
| Asian/Pacific Islander | -30.8%***                              |
| Other                  | -27.5%***                              |
| White Women            | -31.2%***                              |

Source: CHA calculations from the American Community Survey

\*\*\* Indicates statistical significance at the 0.001 level

**Table 5-20: Business Earnings Differentials for Selected Groups Relative to White Men Services, 2012 - 2016**

| Demographic Group      | Earnings Relative to White Men (% Change) |
|------------------------|---|
| Black                  | -74.8%*                                   |
| Hispanic               | -36.9%                                    |
| Native American        | -34.6%                                    |
| Asian/Pacific Islander | 11.8%                                     |
| Other                  | -196.0%*                                  |
| White Women            | -63.3%***                                 |

Source: CHA calculations from the American Community Survey

\*\*\* Indicates statistical significance at the 0.001 level

\* Indicates statistical significance at the 0.05 level

## 6. The Information Technology Industry in the Dallas Fort Worth Metropolitan Area

There were only 21 Native Americans business observations and 22 Others business observations, which impacted the ability to analyze firm activity for these groups. Table 5-21 indicates that White men have higher business formation rates compared to Non-Whites and White Women except for Native Americans. Table 5-22 indicates that none of the coefficients were statistically significant. Table 5-23 indicates that Non-whites and White women earn less than White men and all coefficients are statistically significant except for the coefficient for Native Americans. Table 5-24 indicates that, where analyses could be made, three business coefficients (Black; Asian/Pacific Islanders; White Women) were statistically significant.



**Table 5-21: Business Formation Rates  
Information Technology, 2012 - 2016**

| Demographic Group      | Business Formation Rates |
|------------------------|--------------------------|
| Black                  | 0.6%                     |
| Hispanic               | 3.7%                     |
| Native American        | 5.8%                     |
| Asian/Pacific Islander | 3.5%                     |
| Other                  | 0.0%                     |
| White Women            | 3.3%                     |
| Non-White Male         | 2.9%                     |
| White Male             | 3.8%                     |

Source: CHA calculations from the American Community Survey

**Table 5-22: Business Formation Probability Differentials for Selected Groups  
Relative to White Men, Information Technology, 2012 - 2016**

| Demographic Group      | Probability of Forming a Business Relative to White Men |
|------------------------|---|
| Black                  | -4.3%   |
| Hispanic               | 0.7%  |
| Native American        | 3.5%  |
| Asian/Pacific Islander | -0.7%   |
| Other                  | -----   |
| White Women            | -0.6%   |

Source: CHA calculations from the American Community Survey

**Table 5-23: Wage Differentials for Selected Groups Relative to White Men  
Information Technology, 2012 - 2016**

| Demographic Group | Wages Relative to White Men (% Change) |
|-------------------|--|
| Black             | -31.7%***                              |
| Hispanic          | -22.8%***                              |
| Native American   | -28.0%                                 |

| Demographic Group      | Wages Relative to White Men (% Change) |
|------------------------|--|
| Asian/Pacific Islander | -18.1%***                              |
| Other                  | -28.2%*                                |
| White Women            | -22.3%***                              |

Source: CHA calculations from the American Community Survey

\*\*\* Indicates statistical significance at the 0.001 level

\* Indicates statistical significance at the 0.05 level

**Table 5-24: Business Earnings Differentials for Selected Groups Relative to White Men**

**Information Technology, 2012 - 2016**

| Demographic Group      | Earnings Relative to White Men (% Change) |
|------------------------|---|
| Black                  | -336.0%***                                |
| Hispanic               | 8.8%                                      |
| Native American        | -----                                     |
| Asian/Pacific Islander | -131.0%***                                |
| Other                  | -----                                     |
| White Women            | -170.0%**                                 |

Source: CHA calculations from the American Community Survey

\*\*\* Indicates statistical significance at the 0.001 level

\*\* Indicates statistical significance at the 0.01 level

## C. Disparate Treatment in the Marketplace: Evidence from the Census Bureau’s 2012 Survey of Business Owners

Every five years, the Census Bureau administers the *Survey of Business Owners* (“SBO”) to collect data on particular characteristics of businesses that report to the Internal Revenue Service receipts of \$1,000 or more.<sup>206</sup> The 2012 SBO was released on December 15, 2015, so our analysis reflects the most current data available. The SBO collects demographic data on business owners disaggregated into the following groups:<sup>207,208</sup>

206. See <http://www.census.gov/econ/sbo/about.html> for more information on the Survey.

- Non-Hispanic Blacks
- Latinos
- Non-Hispanic Native Americans
- Non-Hispanic Asians
- Non-Hispanic White Women
- Non-Hispanic White Men
- Firms Equally Owned by Non-Whites and Whites
- Firms Equally Owned by Men and Women
- Firms where the ownership could not be classified
- Publicly-Owned Firms

For purposes of this analysis, the first four groups were aggregated to form a Non-White category. Since our interest is the treatment of Non-White-owned firms and White Women-owned firms, the last five groups were aggregated to form one category. To ensure this aggregated group is described accurately, we label this group “not Non-White/Non-White Women”. While this label is cumbersome, it is important to be clear this group includes firms whose ownership extends beyond White men, such as firms that are not classifiable or that are publicly traded and thus have no racial ownership. In addition to the ownership demographic data, the Survey also gathers information on the sales, number of paid employees, and payroll for each reporting firm.

To examine those industry sectors in which the Dallas Fort Worth Airport purchases, we analyzed economy-wide SBO data on the following sectors:

- Construction
- Professional, Scientific and Technical Services
- Goods
- Other services

However, the nature of the SBO data – a sample of all businesses, not the entire universe of all businesses – required some adjustments. In particular, we had to define the sectors at the 2-digit North American Industry Classification System (“NAICS”) code level, and therefore our sector definitions do not exactly correspond to the definitions used to analyze DFW’s contract data in Chapter IV, where

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207. Race and gender labels reflect the categories used by the Census Bureau.

208. For expository purposes, the adjective “Non-Hispanic” will not be used in this chapter; the reader should assume that any racial group referenced does not include members of that group who identify ethnically as Latino.

we were able to determine sectors at the 6-digit NAICS code level. At a more detailed level, the number of firms sampled in particular demographic and sector cells may be so small that the Census Bureau does not report the information, either to avoid disclosing data on businesses that can be identified or because the small sample size generates unreliable estimates of the universe.<sup>209</sup> We therefore report 2-digit data for purposes of this analysis.

Table 5-25 presents information on which NAICS codes were used to define each sector.

**Table 5-25: 2-Digit NAICS Code Definition of Sector**

| SBO Sector Label  | 2-Digit NAICS Codes                |
|---|------------------------------------|
| Construction  | 23                                 |
| Professional, Scientific, and Technical Services <sup>a</sup> | 54                                 |
| Goods   | 31,42, 44                          |
| Other Services  | 48, 52, 53, 56, 61, 62, 71, 72, 81 |

*a. This sector includes (but is broader than just) construction-related services. It is impossible to narrow this category to construction-related services without losing the capacity to conduct race and gender specific analyses.*

The remainder of Section C of this chapter reports the findings of the SBO analysis. For each sector, we present the data describing the sector and report the disparities within that sector.

## 1. All Industries

For a baseline analysis, we examined all industries in the State of Texas. Table 5-26 presents data on the percentage share that each group has of the total of each of the following six business outcomes:

- The number of all firms
- The sales and receipts of all firms
- The number of firms with employees (employer firms)
- The sales and receipts of all employer firms
- The number of paid employees
- The annual payroll of employer firms

209. Even with these broad sector definitions, there were many cases when the Census Bureau did not report information. In these cases, the value will be entered into the table as "s"

Panel A of Table 5-26 presents data for the four basic Non-White racial groups:

- Black
- Latino
- Native American
- Asian

Panel B of Table 5-26 presents data for six types of firm ownership:

- Non-white
- White Women
- White Men
- Equally Non-Whites and Whites
- Equally women and men
- Firms that are publicly-owned or not classifiable

Categories in the second panel are mutually exclusive. Hence, minority firms that are equally owned by men and women are classified as ‘Non-White’. Firms that are equally owned by minorities and Whites and equally owned by men and women are classified as ‘Equally Non-White & and White’.<sup>210</sup>

**Table 5-26: Percentage Demographic Distribution of Sales and Payroll Data  
All Industries, 2012**

|   | Total Number of Firms (All Firms) | Sales & Receipts - All Firms (\$1,000) | Number of Firms with Paid Employees (Employer Firms) | Sales & Receipts - All Firms with Paid Employees (Employer Firms) (\$1,000) | Number of Paid Employees | Annual payroll (\$1,000) |
|---|-----------------------------------|--|--|---|--------------------------|--------------------------|
| <b>Panel A: Distribution of Non-White Firms</b> |                                   |  |  |   |                          |                          |
| Black   | 8.89%                             | 0.32%                                  | 2.36%  | 0.22%   | 0.85%                    | 0.49%                    |
| Latino  | 29.17%                            | 2.51%                                  | 12.69%   | 1.92%   | 5.25%                    | 3.53%                    |
| Native American                                 | 0.64%                             | 0.08%                                  | 0.54%  | 0.07%   | 0.17%                    | 0.13%                    |
| Asian   | 6.46%                             | 1.72%                                  | 10.35%   | 1.60%   | 3.29%                    | 2.18%                    |

210. Some of the figures in Panel B may not correspond to the related figures in Panel A because of discrepancies in how the SBO reports the data.

|   | Total Number of Firms (All Firms) | Sales & Receipts - All Firms (\$1,000) | Number of Firms with Paid Employees (Employer Firms) | Sales & Receipts - All Firms with Paid Employees (Employer Firms) (\$1,000) | Number of Paid Employees | Annual payroll (\$1,000) |
|---|-----------------------------------|--|--|---|--------------------------|--------------------------|
| <b>Panel B: Distribution of All Firms</b> |                                   |  |  |   |                          |                          |
| Non-White                                 | 45.42%                            | 4.74%                                  | 26.27%   | 3.90%   | 9.71%                    | 6.48%                    |
| White Women                               | 16.39%                            | 2.56%                                  | 12.98%   | 2.31%   | 5.00%                    | 4.08%                    |
| White Men                                 | 29.87%                            | 19.83%                                 | 42.92%   | 19.27%  | 26.19%                   | 25.64%                   |
| Equally Non-White & White                 | 1.07%                             | 0.37%                                  | 1.74%  | 0.33%   | 0.78%                    | 0.55%                    |
| Equally Women & Men                       | 5.71%                             | 1.96%                                  | 9.87%  | 1.80%   | 3.40%                    | 2.67%                    |
| Firms Not Classifiable                    | 1.50%                             | 70.53%                                 | 6.11%  | 72.38%  | 54.89%                   | 60.53%                   |
| <b>All Firms</b>                          | <b>100.00%</b>                    | <b>100.00%</b>                         | <b>100.00%</b>                                       | <b>100.00%</b>  | <b>100.00%</b>           | <b>100.00%</b>           |

Source: CHA calculations from Survey of Business Owners

Since the central issue is the possible disparate treatment of Non-White and White Women firms, Table 5-27 re-aggregates the last four groups—White men; equally Non-White and White; equally women and men; and firms not classifiable—into one group: Not Non-White/Not White Women.<sup>211</sup> We then present the shares each group has of the six indicators of firm utilization. These data were then used to calculate three disparity ratios, presented in Table 5-28:

- Ratio of sales and receipts share for all firms over the share of total number of all firms.
- Ratio of sales and receipts share for employer firms over the share of total number of employer firms.
- Ratio of annual payroll share over the share of total number of employer firms.

For example, the disparity ratio of sales and receipts share for all firms over the share of total number of all firms for Black firms is 3.62 percent (as shown in Table 5-28). This is derived by taking the Black share of sales and receipts for

211. Again, while a cumbersome nomenclature, it is important to remain clear that this category includes firms other than those identified as owned by White men.

all firms (0.3 percent) and dividing it by the Black share of total number of all firms (8.9 percent) that are presented in Table 5-27. If Black-owned firms earned a share of sales equal to their share of total firms, the disparity would have been 100 percent. An index less than 100 percent indicates that a given group is being utilized less than would be expected based on its availability, and courts have adopted the Equal Employment Opportunity Commission’s “80 percent” rule that a ratio less than 80 percent presents a *prima facie* case of discrimination.<sup>212</sup> All disparity ratios for Non-White firms and White Women firms are below this threshold.<sup>213</sup>

**Table 5-27: Demographic Distribution of Sales and Payroll Data – Aggregated Groups  
All Industries, 2012**

|   | Total Number of Firms (All Firms) | Sales & Receipts - All Firms (\$1,000) | Number of Firms with Paid Employees (Employer Firms) | Sales & Receipts - All Firms with Paid Employees (Employer Firms) (\$1,000) | Number of Paid Employees | Annual payroll (\$1,000) |
|---|-----------------------------------|--|--|---|--------------------------|--------------------------|
| <b>Panel A: Distribution of Non-White Firms</b> |                                   |  |  |   |                          |                          |
| Black   | 8.9%                              | 0.3%                                   | 2.4%   | 0.2%  | 0.8%                     | 0.5%                     |
| Latino  | 29.2%                             | 2.5%                                   | 12.7%  | 1.9%  | 5.3%                     | 3.5%                     |
| Native American                                 | 0.6%                              | 0.1%                                   | 0.5%   | 0.1%  | 0.2%                     | 0.1%                     |
| Asian   | 6.5%                              | 1.7%                                   | 10.4%  | 1.6%  | 3.3%                     | 2.2%                     |
| <b>Panel B: Distribution of All Firms</b>       |                                   |  |  |   |                          |                          |
| Non-White                                       | 45.4%                             | 4.7%                                   | 26.3%  | 3.9%  | 9.7%                     | 6.5%                     |
| White Women                                     | 16.4%                             | 2.6%                                   | 13.0%  | 2.3%  | 5.0%                     | 4.1%                     |
| Not Non-White/Not White Women                   | 38.2%                             | 92.7%                                  | 60.7%  | 93.8%   | 85.3%                    | 89.4%                    |
| <b>All Firms</b>                                | <b>100.0%</b>                     | <b>100.0%</b>                          | <b>100.0%</b>  | <b>100.0%</b>   | <b>100.0%</b>            | <b>100.0%</b>            |

Source: CHA calculations from Survey of Business Owners

212. 29 C.F.R. § 1607.4(D) (“A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact.”).

213. Because the data in the subsequent tables are presented for descriptive purposes, significance tests on these results are not conducted.

**Table 5-28: Disparity Ratios of Firm Utilization Measures  
All Industries, 2012**

|  | Ratio of Sales to Number of Firms (All Firms) | Ratio of Sales to Number of Firms (Employer Firms) | Ratio of Payroll to Number of Employer Firms |
|--|---|--|--|
| <b>Panel A: Disparity Ratios for Non-White Firms</b> |   |  |  |
| Black  | 3.62%   | 9.17%  | 57.98%                                       |
| Latino   | 8.58%   | 15.12%   | 67.30%                                       |
| Native American                                      | 13.14%  | 13.30%   | 76.33%                                       |
| Asian  | 26.66%  | 15.40%   | 66.34%                                       |
| <b>Panel B: Disparity Ratios for All Firms</b>       |   |  |  |
| Non-Whites   | 10.43%  | 14.83%   | 66.76%                                       |
| White Women  | 15.63%  | 17.76%   | 81.50%                                       |
| Not Non-White/Not White Women                        | 242.88%                                       | 154.50%  | 104.87%                                      |
| <b>All Firms</b>                                     | <b>100.0%</b>                                 | <b>100.0%</b>                                      | <b>100.0%</b>                                |

Source: CHA calculations from Survey of Business Owners

This same approach was used to examine the construction, professional, scientific and technical services, goods, and other services sectors. The following are summaries of the results of the disparity analyses.

## 2. Construction

Of the 16 disparity ratios for Non-White firms and White Women firms presented in Table 5-29, 12 fall under the 80 percent threshold.



**Table 5-29: Disparity Ratios – Aggregated Groups  
Construction, 2012**

|  | Ratio of Sales to Number of Firms (All Firms) | Ratio of Sales to Number of Firms (Employer Firms) | Ratio of Payroll to Number of Employer Firms |
|--|---|--|--|
| <b>Panel A: Disparity Ratios for Non-White Firms</b> |   |  |  |
| Black  | 18.62%  | s  | s  |
| Latino   | 19.51%  | 36.60%   | 67.00%                                       |
| Native American                                      | 36.34%  | 32.06%   | 80.14%                                       |
| Asian  | 47.90%  | 46.60%   | 90.44%                                       |
| <b>Panel B: Disparity Ratios for All Firms</b>       |   |  |  |
| Non-White  | 20.48%  | 38.20%   | 69.89%                                       |
| White Women  | 92.45%  | 49.52%   | 89.15%                                       |
| Not Non-White/Not White Women                        | 207.49%                                       | 123.24%  | 104.51%                                      |
| <b>All Firms</b>                                     | <b>100.00%</b>                                | <b>100.00%</b>                                     | <b>100.00%</b>                               |

Source: CHA calculations from Survey of Business Owners

### 3. Construction-Related Services

Of the 18 disparity ratios for Non-White firms and White Women firms presented in Table 5-30, 12 fall under the 80 percent threshold.

**Table 5-30: Disparity Ratios – Aggregated Groups  
Professional, Scientific, and Technical Services, 2012**

|  | Ratio of Sales to Number of Firms (All Firms) | Ratio of Sales to Number of Firms (Employer Firms) | Ratio of Payroll to Number of Employer Firms |
|--|---|--|--|
| <b>Panel A: Disparity Ratios for Non-White Firms</b> |   |  |  |
| Black  | 13.21%  | 26.05%   | 170.60%                                      |
| Latino   | 24.81%  | 35.69%   | 179.04%                                      |
| Native American                                      | 27.69%  | 24.04%   | 164.27%                                      |
| Asian  | 49.37%  | 36.87%   | 223.08%                                      |

|  | Ratio of Sales to Number of Firms (All Firms) | Ratio of Sales to Number of Firms (Employer Firms) | Ratio of Payroll to Number of Employer Firms |
|--|---|--|--|
| <b>Panel B: Disparity Ratios for All Firms</b> |   |  |  |
| Non-White                                      | 27.84%  | 34.65%   | 193.44%                                      |
| White Women                                    | 26.84%  | 30.53%   | 173.42%                                      |
| Not Non-White/Not White Women                  | 173.61%                                       | 135.71%  | 93.94%                                       |
| <b>All Firms</b>                               | <b>100.0%</b>                                 | <b>100.0%</b>                                      | <b>100.0%</b>                                |

Source: CHA calculations from Survey of Business Owners

#### 4. Goods

Of the 18 disparity ratios for Non-White firms and White Women firms presented in Table 5-31, 15 fall under the 80 percent threshold.

**Table 5-31: Disparity Ratios – Aggregated Groups  
Goods, 2012**

|  | Ratio of Sales to Number of Firms (All Firms) | Ratio of Sales to Number of Firms (Employer Firms) | Ratio of Payroll to Number of Employer Firms |
|--|---|--|--|
| <b>Panel A: Disparity Ratios for Non-White Firms</b> |   |  |  |
| Black  | 1.83%   | 7.55%  | 82.29%                                       |
| Latino   | 5.77%   | 11.74%   | 78.42%                                       |
| Native American                                      | 9.02%   | 12.08%   | 102.45%                                      |
| Asian  | 18.44%  | 9.97%  | 67.37%                                       |
| <b>Panel B: Disparity Ratios for All Firms</b>       |   |  |  |
| Non-White  | 7.96%   | 10.77%   | 73.97%                                       |
| White Women  | 9.11%   | 14.51%   | 93.05%                                       |
| Not Non-White/Not White Women                        | 246.36%                                       | 160.74%  | 102.43%                                      |
| <b>All Firms</b>                                     | <b>100.00%</b>                                | <b>100.00%</b>                                     | <b>100.00%</b>                               |

Source: CHA calculations from Survey of Business Owners

## 5. Services

Of the 16 disparity ratios for Non-White firms and White Women firms presented in Table 5-32, 16 fall under the 80 percent threshold.

**Table 5-32: Disparity Ratios – Aggregated Groups  
Services, 2012**

|  | Ratio of Sales to<br>Number of<br>Firms<br>(All Firms) | Ratio of Sales to<br>Number of<br>Firms<br>(Employer<br>Firms) | Ratio of Payroll<br>to Number of<br>Employer Firms |
|--|--|--|--|
| <b>Panel A: Disparity Ratios for Non-White Firms</b> |  |  |  |
| Black  | 8.2%   | 18.1%  | s  |
| Latino   | 16.7%  | 25.8%  | 64.3%  |
| Native American                                      | 22.8%  | 22.6%  | s  |
| Asian  | 40.8%  | 23.6%  | 63.1%  |
| <b>Panel B: Disparity Ratios for All Firms</b>       |  |  |  |
| Non-White  | 18.6%  | 24.2%  | 63.6%  |
| White Women  | 24.7%  | 26.2%  | 72.9%  |
| Not Non-White/Not<br>White Women                     | 261.6%   | 157.1%   | 108.9%   |
| <b>All Firms</b>                                     | <b>100.0%</b>  | <b>100.0%</b>  | <b>100.0%</b>                                      |

Source: CHA calculations from Survey of Business Owners

## D. Evidence of Disparities in Access to Business Capital

Capital is the lifeblood of any business. Participants in the anecdotal data collection universally agreed to this fundamental fact. The interviews with business owners conducted as part of this Study confirmed that small firms, especially minority- and women-owned firms, had difficulties obtaining needed working capital to perform on the Airport's contracts and subcontracts, as well as expand the capacities of their firms. As discussed above, discrimination may even prevent firms from forming in the first place.

There is an extensive body of scholarly work on the relationship between personal wealth and successful entrepreneurship. There is a general consensus that disparities in personal wealth translate into disparities in business creation and ownership.<sup>214</sup>

The Federal Reserve Board and the U.S. Small Business Administration have conducted surveys of discrimination in the small business credit market for 1993, 1998 and 2003. These Surveys of Small Business Finances (“SSBF”) are based on a large representative sample of firms with fewer than 500 employees. The main finding from these Surveys is that MBEs experience higher loan denial probabilities and pay higher interest rates than white-owned businesses, even after controlling for differences in credit worthiness and other factors. Blacks, Hispanics and Asians were more likely to be denied credit than Whites, even after controlling for firm characteristics like credit history, credit score and wealth. Blacks and Hispanics were also more likely to pay higher interest rates on the loans they did receive.<sup>215</sup>

A recent report to the U.S. Department of Commerce summarizes these Surveys, results from the Kauffman Firm Survey,<sup>216</sup> data from the U.S. Small Business Administration’s Certified Development Company/504 Guaranteed Loan Program<sup>217</sup> and additional extensive research on the effects of discrimination on opportunities for MBEs. The most comprehensive report of its kind, “Disparities in Capital Access Between Minority and Non-Minority Owned Businesses: The Troubling Reality of Capital Limitations Faced by MBEs”, found that

Low levels of wealth and liquidity constraints create a substantial barrier to entry for minority entrepreneurs because the owner’s wealth can be invested directly in the business, used as collateral to obtain business loans or use to acquire other businesses.... [T]he largest single actor explaining racial disparities in business creation rates are differences in asset levels.”<sup>218</sup>

Some of the key findings of the Report include:

- Minority-owned firms are less likely to receive loans than non-minority owned firms regardless of firm size. According to an analysis of data from the *Survey of Small Business Finances*, for firms with gross receipts over \$500,000, 52 percent of non-minority owned firms received loans compared to 41 percent of minority-owned firms.

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214. See, e.g., Evans, David S. and Jovanovic, Boyan, “An Estimated Model of Entrepreneurial Choice under Liquidity Constraints,” *Journal of Political Economy*, (1989); Evans, David S. and Leighton, Linda “Some empirical aspects of entrepreneurship,” *American Economic Review*, (1989).
215. See Blanchflower, D. G., Levine. P. and Zimmerman, D., “Discrimination In The Small Business Credit Market,” *Review of Economics and Statistics*, (2003); Cavalluzzo, K. S. and Cavalluzzo, L. C. (“Market structure and discrimination, the case of small businesses,” *Journal of Money, Credit, and Banking*, (1998).
216. [http://www.kauffman.org/~media/kauffman\\_org/research%20reports%20and%20covers/2013/06/kauffmanfirmsurvey2013.pdf](http://www.kauffman.org/~media/kauffman_org/research%20reports%20and%20covers/2013/06/kauffmanfirmsurvey2013.pdf).
217. <http://www.sba.gov/category/navigation-structure/loans-grants/small-business-loans/sba-loan-programs/real-estate-and-eq>.
218. Fairlie, R. W. and Robb, A., “Disparities in Capital Access Between Minority and Non-Minority Owned Businesses: The Troubling Reality of Capital Limitations Faced by MBEs,” U.S. Department of Commerce, Minority Business Development Agency, 2010, pp. 22-23.

- When minority-owned firms do receive financing, it is for less money and at a higher interest rate than non-minority owned firms regardless of the size of the firm. Minority-owned firms paid an average of 7.8 percent in interest rates for loans compared to 6.4 percent for non-minority owned firms. Among firms with gross receipts under \$500,000, minority-owned firms paid an average of 9.1 percent in interest rates compared to 6.9 percent for non-minority owned firms.
- Minority owned firms are more likely to be denied loans. Among firms with gross receipts under \$500,000, loan denial rates for minority firms were about three times higher, at 42 percent, compared to those of non-minority owned firm, at 16 percent. For high sales firms, the rates of loan denial were almost twice as high for MBEs as for non-MBEs.
- MBEs pay higher interest rates for business loans. For all firms, MBEs paid 7.8 percent on average for loans compared with 6.4 percent for non-MBEs. The difference was smaller, but still high, between MBEs and non-MBEs with high sales.
- Minority-owned firms receive smaller equity investments than non-minority owned firms even when controlling for detailed business and owner characteristics. The differences are large and statistically significant. The average amount of new equity investments in minority-owned firms receiving equity is 43 percent of the average of new equity investments in non-minority owned firms. The differences were even larger for loans received by high sales firms. Yet, venture capital funds focusing on investing in minority firms provide returns that are comparable to mainstream venture capital firms.<sup>219</sup>
- Disparities in total investments in minority-owned firms compared to those in non-minority owned firms grew after the first year of business operations. According to the analysis of the data from the Kauffman Firm Survey, minority-owned firms' investments into their firms were about 18 percent lower in the first year of operations compared to those of non-minority owned firms. This disparity grew in the subsequent three years of operations, where minorities' investments into their firms were about 36 percent lower compared to those of non-minority owned firms.

Minority entrepreneurs face challenges (including lower family wealth and difficulty penetrating financial markets and networks) directly related to race that limit their ability to secure financing for their businesses.<sup>220</sup>

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219. See Bates, T., "Venture Capital Investment in Minority Business," *Journal of Money Credit and Banking* 40, 2-3 (2008).

220. Fairlie, R.W. and Robb, A., *Race and Entrepreneurial Success: Black-, Asian- and White-Owned Businesses in the United States*, (Cambridge: MIT Press, 2008).

These findings are consistent with those of the 2012 study. Examining the *Survey of Small Business Finances* (“SSBF”), conducted by the Federal Reserve Board and the U.S. Small Business Administration from 1999-2003, the study found that MBEs experience significant barriers compared to similar non-M/WBEs. When minority-owned firms did apply for a loan, their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences like firm size and credit history. Loan denial rate ranged from 8 to 24 percentage points higher than for non-minority male-owned small businesses. When minority-owned firms did receive a loan, they were obligated to pay higher interest rates on the loans than comparable non-minority owned firms. These results strongly suggest that MBEs do not enjoy full and fair access to the credit necessary to perform on DFW’s prime contracts and associated subcontractors.

## **E. Evidence of Disparities in Access to Human Capital**

There is a strong intergenerational correlation with business ownership. The probability of self-employment is significantly higher among the children of the self-employed. This was evident in the large number of non-M/WBEs in our interview groups who were second or even higher generation firms doing business for the market area. This disadvantages minorities, whose earlier generations were denied business ownership through either *de jure* segregation or *de facto* exclusion.

There is evidence that current racial patterns of self-employment are in part determined by racial patterns of self-employment in the previous generation.<sup>221</sup> Black men have been found to face a “triple disadvantage”; they are less likely than White men to:

1. Have self-employed fathers;
2. Become self-employed if their fathers were not self-employed; and
3. To follow their fathers into self-employment.<sup>222</sup>

Intergenerational links are also critical to the success of the businesses that do form.<sup>223</sup> Working in a family business leads to more successful firms by new owners. One study found that only 12.6 percent of Black business owners had prior work experiences in a family business as compared to 23.3 percent of White business owners.<sup>224</sup> This creates a cycle of low rates of minority ownership and worse

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221. Fairlie, R.W., “The Absence of the African-American Owned Business, An Analysis of the Dynamics of Self-Employment,” *Journal of Labor Economics*, (1999).

222. Hout, M. and Rosen, H. S., “Self-employment, Family Background, and Race,” *Journal of Human Resources* 35, no.4 (2000).

223. Fairlie, R.W. and Robb, A., “Why are black-owned businesses less successful than White-owned businesses? The role of families, inheritances, and business human capital,” *Journal of Labor Economics*, (2007).

outcomes being passed from one generation to the next, with the corresponding perpetuation of advantages to White-owned firms.

Similarly, unequal access to business networks reinforces exclusionary patterns. The composition and size of business networks are associated with self-employment rates.<sup>225</sup> The U.S. Department of Commerce has reported that the ability to form strategic alliances with other firms is important for success.<sup>226</sup> M/WBEs in our interviews reported that they felt excluded from the networks that help to create success in the highway construction industry.

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224. *Id.*

225. Allen, W. D., "Social Networks and Self-Employment," *Journal of Socio-Economics* 29, no.5 (2000).

226. Increasing MBE Competitiveness through strategic Alliances (Minority Business Development Agency, 2008).





## VI. QUALITATIVE EVIDENCE OF RACE AND GENDER BARRIERS IN THE DALLAS FORT WORTH INTERNATIONAL AIRPORT'S MARKET

In addition to quantitative data, a disparity study should further explore anecdotal evidence of experiences with discrimination in contracting opportunities and DFW's business opportunity programs. This evidence is relevant to the question of whether observed statistical disparities in its locally-funded contracts are due to discrimination and not to some other non-discriminatory cause or causes, as well as the likely efficacy of any race- and gender-neutral remedies employed by DFW for all its contracting opportunities. As discussed in Chapter II, this type of anecdotal data has been held by the courts to be relevant and probative of whether the Airport continues to have a need to use narrowly tailored DBE, ACDBE and M/WBE contract goals to remedy the effects of past and current discrimination and create a level playing field for contract opportunities for all firms.

The Supreme Court has held that anecdotal evidence can be persuasive because it "brought the cold [statistics] convincingly to life."<sup>227</sup> Evidence about discriminatory practices engaged in by prime contractors, agency personnel, and other actors relevant to business opportunities has been found relevant regarding barriers both to minority firms' business formation and to their success on governmental projects.<sup>228</sup> While anecdotal evidence is insufficient standing alone, "[p]ersonal accounts of actual discrimination or the effects of discriminatory practices may, however, vividly complement empirical evidence. Moreover, anecdotal evidence of a [government's] institutional practices that exacerbate discriminatory market conditions are [sic] often particularly probative."<sup>229</sup> "[W]e do not set out a categorical rule that every case must rise or fall entirely on the sufficiency of the numbers. To the contrary, anecdotal evidence might make the pivotal difference in some cases; indeed, in an exceptional

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227. *International Brotherhood of Teamsters v. United States*, 431 U.S. 324, 399 (1977).

228. *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1168-1172 (10th Cir. 2000), cert. granted, 532 U.S. 941, then dismissed as improvidently granted, 534 U.S. 103 (2001).

229. *Concrete Works of Colorado, Inc. v. City and County of Denver*, 36 F.3d 1513, 1120, 1530 (10th Cir. 1994).

case, we do not rule out the possibility that evidence not reinforced by statistical evidence, as such, will be enough.”<sup>230</sup>

There is no requirement that anecdotal testimony be “verified” or corroborated, as befits the role of evidence in legislative decision-making, as opposed to judicial proceedings. “Plaintiff offers no rationale as to why a fact finder could not rely on the State’s ‘unverified’ anecdotal data. Indeed, a fact finder could very well conclude that anecdotal evidence need not—indeed cannot—be verified because it ‘is nothing more than a witness’ narrative of an incident told from the witness’ perspective and including the witness’ perception.”<sup>231</sup> Likewise, the Tenth Circuit held that “Denver was not required to present corroborating evidence and [plaintiff] was free to present its own witnesses to either refute the incidents described by Denver’s witnesses or to relate their own perceptions on discrimination in the Denver construction industry.”<sup>232</sup>

To explore this type of anecdotal evidence of possible discrimination against minorities and women in the Airport’s geographic and industry markets and the effectiveness of its current race-conscious and race-neutral measures, we conducted public business owner and stakeholder interviews, totaling 154 participants. We met with a broad cross section of business owners from the Airport’s geographic and industry markets. Firms ranged in size from large national businesses to established family-owned firms to new start-ups. We sought to explore their experiences in seeking and performing public and private sector prime contracts and subcontracts and concession contracts with DFW, other government agencies, and in the private sector. We also elicited recommendations for improvements to the DFW’s DBE Program, ACDBE Program, the M/WBE Program, and SBE Program, as discussed in Chapter III.

Many minority and women owners reported that while some progress has been made in integrating their firms into public and private sector transportation contracting activities through race- and gender-conscious contracting programs, significant barriers remain. Race- and gender-neutral approaches alone were described as unlikely to ensure a level playing field for DFW contract and concession opportunities.

We also conducted an electronic survey of firms in DFW’s market area about their experiences in obtaining work, marketplace conditions and the agency’s contracting equity programs. The results were similar to those of the interviews. Almost 40 percent reported they still experience barriers to equal contracting opportunities; almost a quarter said their competency was questioned because of their race or gender; and almost 30 percent indicated less access to business networks and information.

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230. *Engineering Contractors Association of South Florida, Inc. v. Metropolitan Dade County*, 122 F.3d 895, 926 (11<sup>th</sup> Cir. 1997).

231. *H.B. Rowe Co., Inc. v. Tippett*, 615 F.3d 233, 249 (4<sup>th</sup> Cir. 2010).

232. *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 989 (10<sup>th</sup> Cir. 2003), *cert. denied*, 540 U.S. 1027 (2003).

## A. Business Owner Interviews

The following are summaries of the issues discussed. Quotations are indented and may have been shortened for readability. The statements are representative of the views expressed over the many sessions by numerous participants.

Many minority and female owners reported that they still suffer from biased perceptions and stereotypes about their competency and professionalism. While sometimes subtle,<sup>233</sup> these biases about minorities' and women's lack of competence or executive status infect all aspects of their attempts to obtain contracts and to be treated equally in performing contract work.

When I get in the room, I have to prove to you that I know what I'm doing. And, I just proved [it] to you yesterday, and now here's the next task order, and I'm having to come to you again.... You want to get angry, and you want to get frustrated, and you want to say, "I proved this." But, what I found is, just do the work. Be confident in yourself, know that you're capable, and prove it. You don't want to have to, but just do it.

Pretty good for a girl.

One time in particular, we were having a little situation and they wanted to meet. But, they didn't want to meet with me.... You're gonna meet with me, because it's about the company and if you check, I'm 51 percent owner and we're gonna press on.... I get that not often, but I do get it.... When I show up, I want to conduct business, I don't want to talk about football.

We had won the big [design contract]. And all these consultants were coming in and these were consultants that I hadn't worked with on [the project], that I didn't have relationships with like we know each other. They were coming in and they were going directly to [my white male employee]. And they were just like, "I understand that you guys won this contract and we love to work with you" what have you. And I'm just standing over here, off to the side.... When we got in the boardroom, and they started talking about the contracts, they said, "Well, we have the [name] team, which is being led by the contract signatory [name]. Is he here?" I stood up, sat back down. And then, as soon as the board meeting was over, it was hilarious. I'm at my car, getting ready to leave, and there the same guys are running up to me. Just running up.... I don't take it personally.... But, there are nights you want to cry. There are nights where you want to scream. And, it gets

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233. See, e.g., <http://www.sciencedirect.com/science/article/pii/S0191308509000239>.

frustrating when you know you know what you're doing, and you hear this thing.

It makes us have to work harder.

In my industry- it's mostly a male dominated industry- all the people that I deal with here, they're pretty much all male.... You just learn how to work with it. It's not all the time, but it's a lot of the time, 'cause I'm not some big guy telling them how to use a piece of equipment.

Several minority owners experienced a stigma in being labeled a “minority” or a “woman” firm.

Stigma sometimes can come from leading your marketing with M/WBE status, and that's a quick way to [not get work].

Sometimes I choose not to present myself as a minority contractor.... Obviously, when people meet me they assume certain things. As they get to know me and understand that I can speak construction, that I'm bilingual, that I speak engineering, then I get the comment, "Oh, you're different." Or, "You're educated."... I do think that there is a stigma.

We're leaders in this work for a long time. I've had firms call me and say, "Well, you know, we're going to hire the big guys, and we'll hire you too, as the WBE, and you can work with them." It was like, time out. Remember back in 2013 when TSA had 30 of these huge projects that they put out? Those guys won 13 of them. We won 13. We can do what they do all day long ... we're not 8A. We don't need to have somebody holding our hand, but we still get that.

80 percent of our business is prime, and that's how we look at ourselves. We're just a firm that had just happened to be a Black firm, but we do great work, and we don't want to be labeled as a minority firm. That really did have a problem for us.

There's still this stigma. “Well, I guess, you know, we'll see what the little girls are doing over there.”

Some women had experienced sexual harassment in connection with their work or professional activities.

I've had dinner encounters ... I've had a guy grab me at one of those.... I definitely do make it a point to not ride with certain people that I don't feel comfortable with.

Another women disagreed; she had not found sexism to be an issue for her.

I work with gentlemen. I have not had that problem [in engineering].... I would not label my industry to be one in which women are not

welcome. Because I've done well. But, rather, women have chosen not to pursue a career in it.... Eventually, working with the guys that didn't want to work with you, they do come around. My worst adversaries are women.

There is a further bias against small firms, which especially impacts M/WBEs.

You're constantly having to rebuild the trust, whereas with a big firm, they go, "Oh yeah, they've done tons of work," and they just keep them because it's that level of trust.

It's still that perception that a 100 man firm can do a better job than a 40 man firm, even though both firms are only using six people to get the job done.

Most participants reported that becoming certified as an M/WBE, DBE or ACDBE helped to reduce these barriers.

Certification becomes a benefit when there's a goal. Certification has no benefit without a goal.

[It has] been very, very helpful to be certified.

We wouldn't be working, I don't think, at DFW, if it wasn't for that, because there was an incumbent here, that just, that gave us a little bit of an edge with some of the newer players that came in, and we were able to get in the door.

I don't think we would have gotten our foot in the door here without it. I think it's very useful, and a lot of the firms that are using us used us before. They'll continue to use us whether or not we have that, but it has been able, it's been a good way to get introduced to new firms and start new relationships.

If I wouldn't have my certification, I'd probably be out of here.

It opens the door to different firms. Because you may have worked in a couple of big firms before, and they know you, you know? But to new firms, I went DB[E] certification, enables them to bring you aboard. [These firms have used us later on non-goals jobs].

Having that certification bumps up our percentage, and I had a perfect example. We were in on a master plan to do so much of the work, and then there was a problem with another DBE, which I don't know what that means, I just think it means they didn't have their certification in, and they were needing to hurry up and quickly get some dollars to get their overall DBE percentage up to that level they needed to be, and since we've been good, team players all along, they said, "Here's

another \$80,000," which ended up making our contract pretty large on that master plan, which if we weren't DBE, it would have gone to somebody else. And we're actually doing the work for it. I think it helps, but it's hard to say exactly how much.

The very large firms could totally do 100 percent of the work scope with their in house people, and that would be their preference in most cases. The only way there's going to be a foot in the door for firms such as ours, is for there to be that mandatory requirement.

A few minority and women firms reported that they found it easier to access opportunities in the private sector than for Airport jobs.

[The] private sector is less conscious of gender or race than the public sector. The public sector, we're still battling it, but in the private sector, they're just looking for if you can do a good job at a reasonable price.

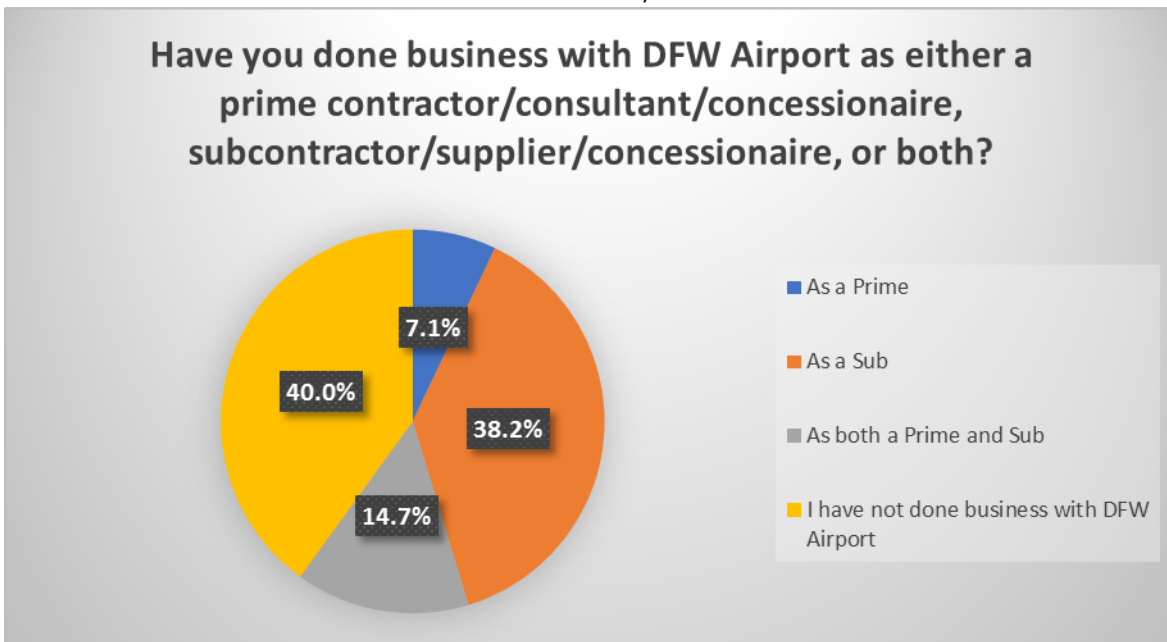
We're not having that much of a problem, either. Actually, we do a lot of private work.

## B. Anecdotal Survey

To supplement the in-person interviews, we also conducted an electronic survey of firms on our availability list. One-hundred and seventy (170) minority- and women-owned firms completed the survey.

### 1. Respondents' Profiles

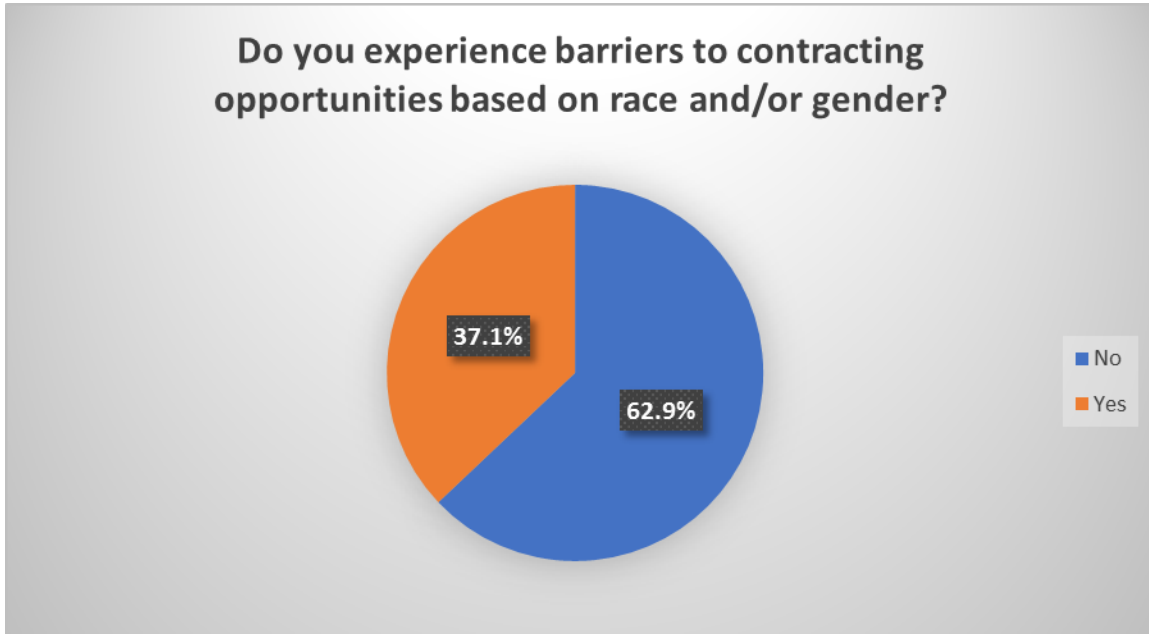
Only 7.1 percent of the firms had worked on DFW projects just as a prime contractor/consultant or concessionaire; 38.2 percent had worked only as a subcontractor; 14.7 percent had worked as both a prime contractor, consultant or concessionaire, and as a subcontractor, subconsultant or supplier; and 40 percent had not done business on any DFW contracts.



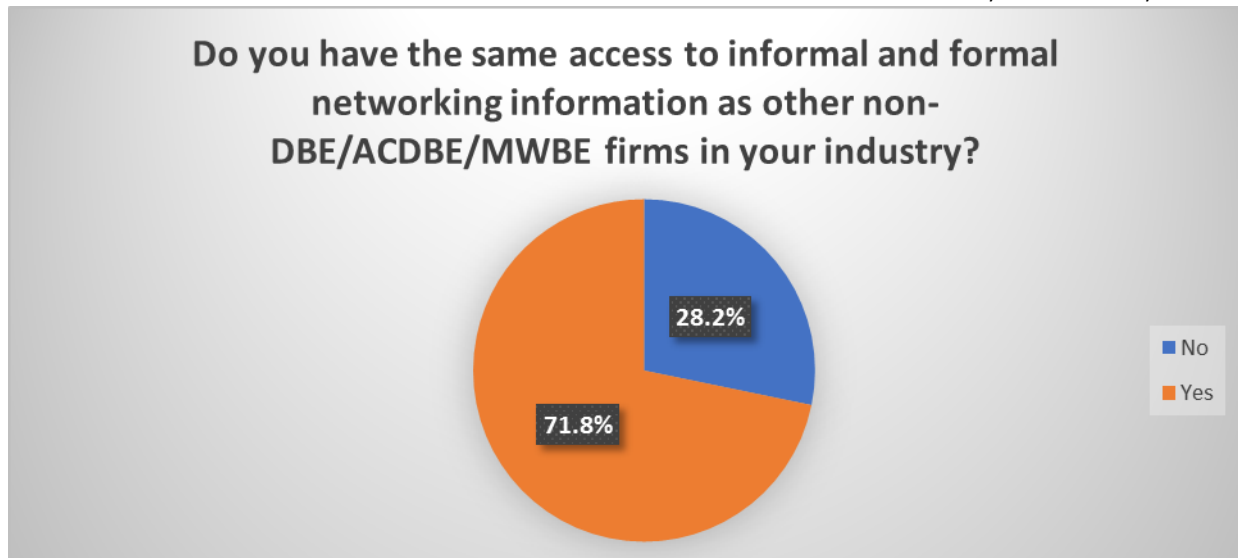
### 2. Responses

These respondents reported the following experiences.

Almost 40 percent answered yes to the question “Do you experience barriers to contracting opportunities based on race and/or gender?”

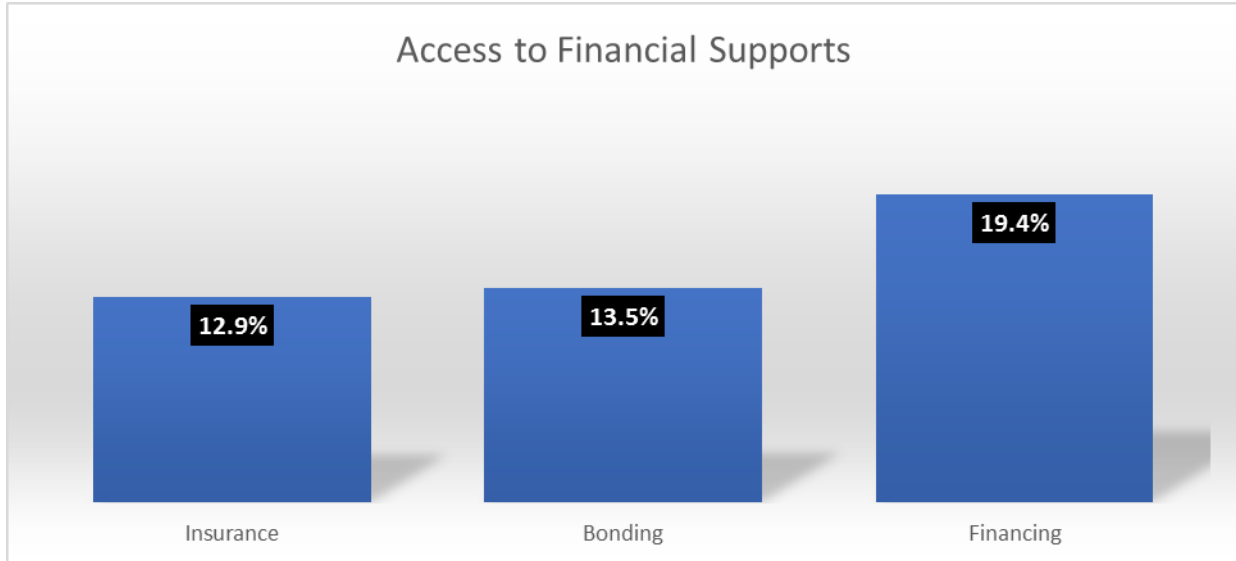


Over a quarter (28.2 percent) answered no to the question “Do you have access to informal and formal networking information and have the same access to the same information as other non-DBE firms in your industry?”

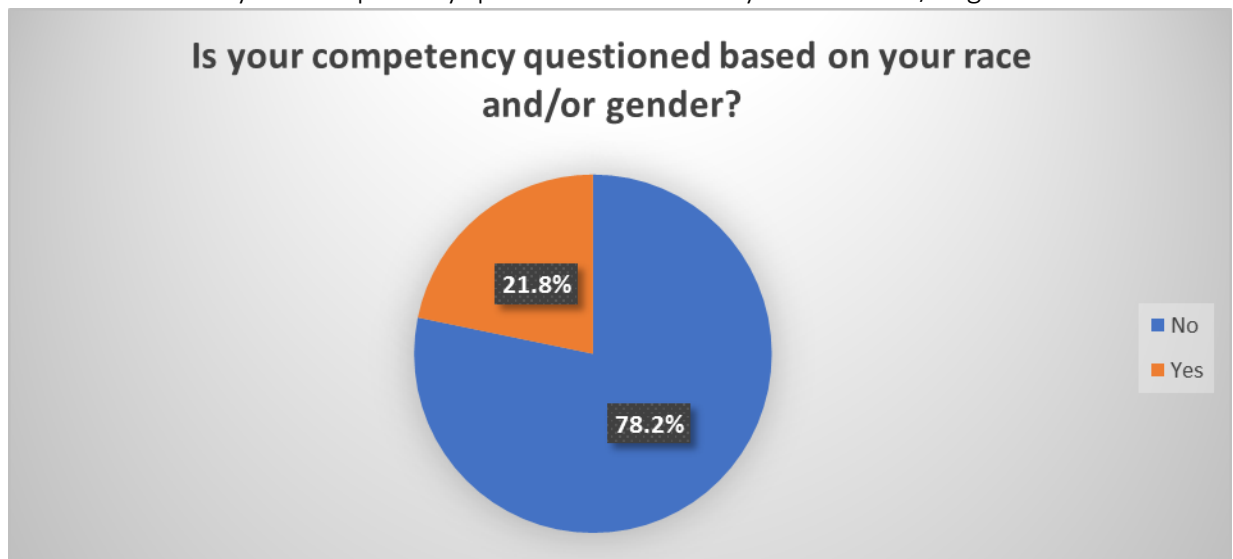




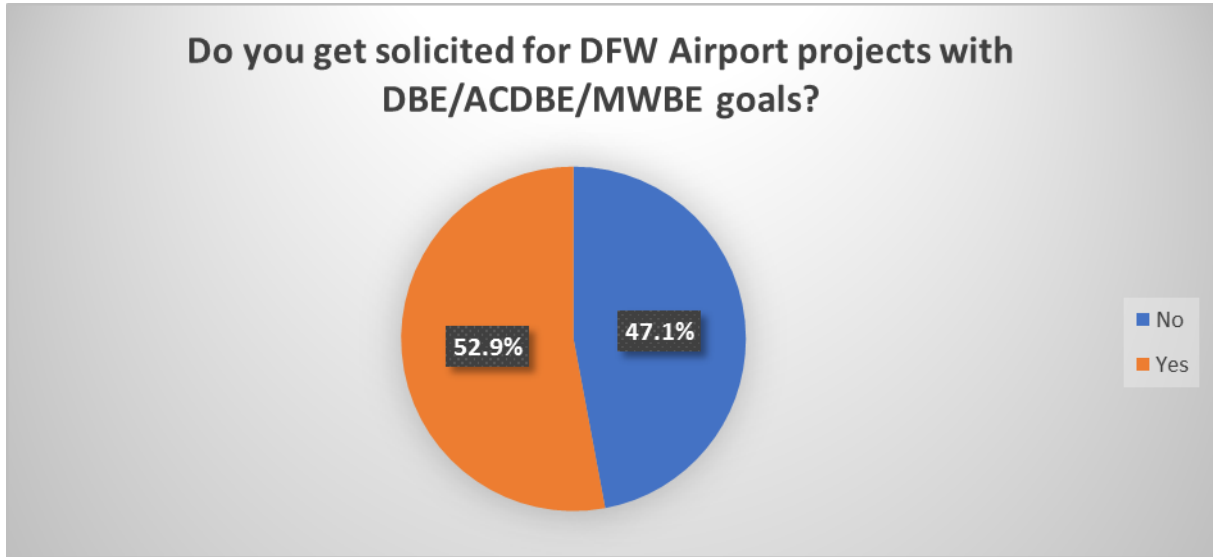
12.9 percent reported they have unequal access to insurance; 13.5 percent reported they have unequal access to surety bonding services; and almost 20 percent reported they have unequal access to financing and business capital.



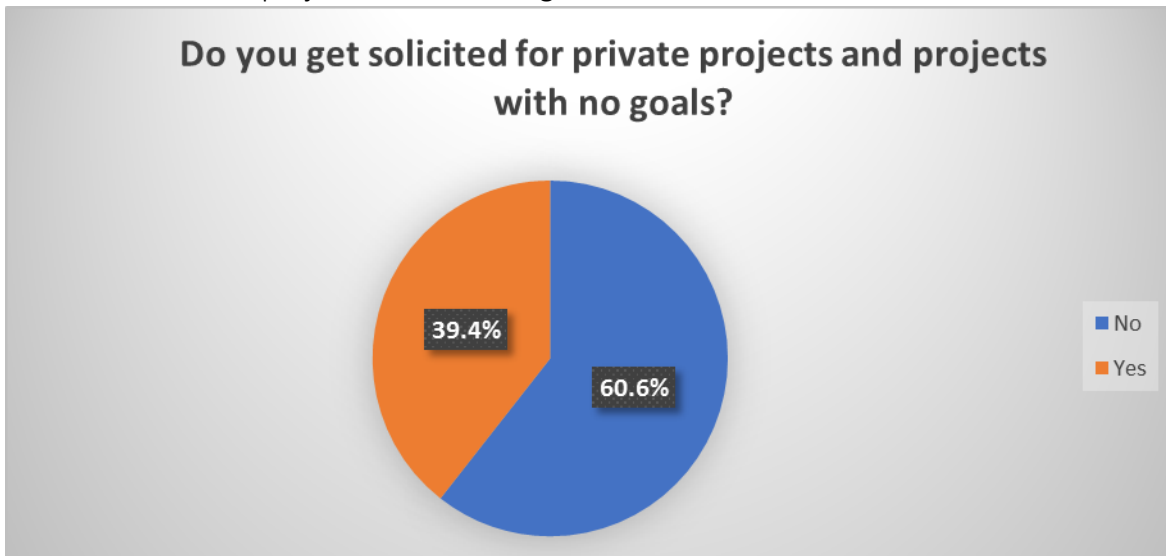
A little more than one fifth (21.8 percent) answered yes to the question “Is your competency questioned based on your race and/or gender?”



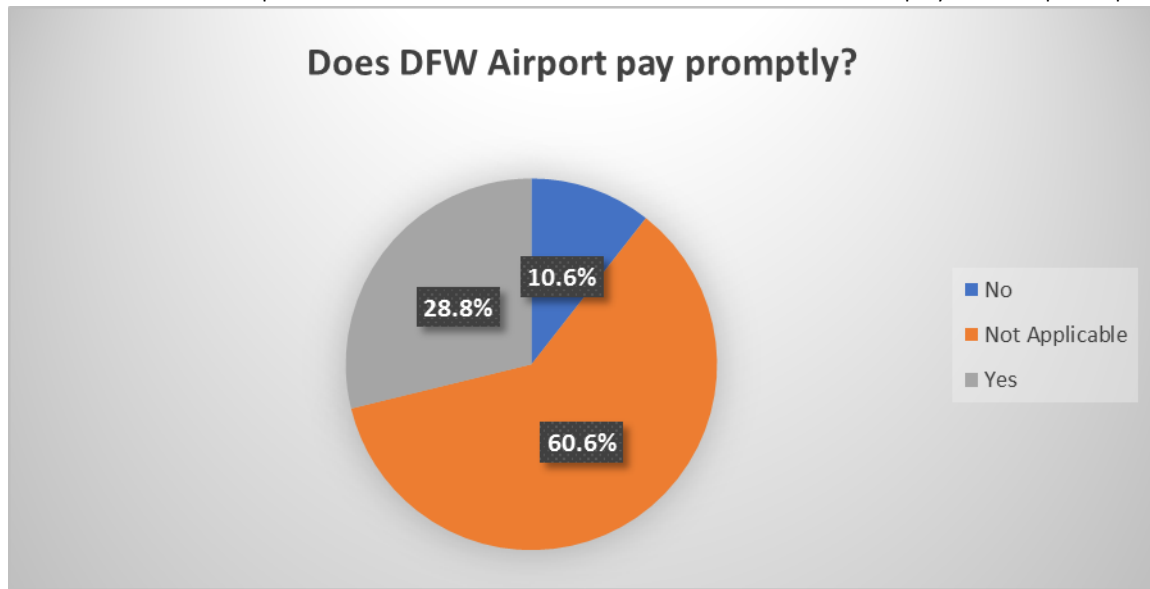
Over 50 percent reported they are solicited for DFW or government projects with DBE, ACDBE, or M/WBE goals.



However, less than 40 percent reported they are solicited for private projects and projects without DBE goals.



28.8 percent of those with DFW work stated that DFW pays them promptly.



### 3. Other Survey Results

Respondents reported participating in DBE, ACDBE, or M/WBE business support or development activities: 55.3 percent indicated they had not participated in any of these programs.

- 10.6 percent had participated in financing or loan programs.
- 7.1 percent had accessed bonding support programs.
- 18.8 percent had participated in a mentor-protégé program or relationship.
- 10 percent had received support services such as assistance with marketing, estimating, information technology.
- 24.7 percent had joint ventured with another firm.
- 9.4 percent reported they experience job-related sexual or racial harassment or stereotyping.
- 11.2 percent stated they experience discrimination from suppliers or subcontractors because of their race and/or gender.

## C. Conclusion

Consistent with other evidence reported in this Study, the anecdotal interviews and the survey results strongly suggest that minorities and women continue to

suffer discriminatory barriers to full and fair access to contracts and associated subcontracts in DFW's market area. While not definitive proof that DFW needs to continue to implement race- and gender-conscious remedies for these impediments, the results of the qualitative data are the types of evidence that, especially when considered in conjunction with the numerous pieces of statistical evidence assembled, the courts have found to be highly probative of whether DFW would be a passive participant in a discriminatory market area without affirmative interventions and whether race-conscious remedies are necessary to address that discrimination.

# VII. RECOMMENDATIONS FOR THE DALLAS FORT WORTH INTERNATIONAL AIRPORT'S BUSINESS DIVERSITY PROGRAMS

The quantitative and qualitative data in this study provide a thorough examination of the evidence of the experiences of minority- and women-owned firms in the Dallas Fort Worth International Airport's ("DFW" or "Airport") geographic and industry markets. As required by strict constitutional scrutiny, the Disadvantaged Business Enterprise ("DBE") program for Federal Aviation Administration ("FAA") contracts<sup>234</sup> and the Airport Concessions Disadvantaged Business Enterprise ("ACDBE") program for airport concession contracts<sup>235</sup>, we analyzed evidence of DBE, ACDBE, Minority-Owned Business Enterprise ("MBE"), and Woman-Owned Business Enterprise ("WBE") (collectively, "M/W/DBE") utilization by DFW as measured by dollars spent. We next estimated the availability of M/W/DBEs and ACDBEs in the Airport's markets in the aggregate and by funding source and detailed industry code. We then compared DFW's utilization of M/W/DBEs to the availability of all ready, willing and able firms in its markets to calculate whether there are disparities between utilization and availability for non-FAA funded contracts. We also solicited anecdotal or qualitative evidence of M/W/DBEs' and ACDBEs' experiences in obtaining contracts and concession opportunities in the public and private sectors. DFW staff also provided extensive input about the operations of the programs and suggestions for enhancements. These results provide the Airport with the evidence necessary to narrowly tailor its MWBE program for locally-funded contracts; its DBE program for FAA funded contracts as required by 49 C.F.R. Part 26; and its ACDBE program as required by 49 C.F.R. Part 23. Based upon these quantitative and qualitative findings, we make the following recommendations that reflect the business owner and stakeholder interviews, the input of agency staff, and national best practices for business diversity programs.

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234. 49 C.F.R. Part 26.

235. 49 C.F.R. Part 23.

## A. Augment Race- and Gender-Neutral Measures

The courts and the DBE and ACDBE program regulations require that agencies use race-neutral<sup>236</sup> approaches to the maximum feasible extent to meet the annual DBE and ACDBEs goals for federal transportation contracts and for all locally-funded contracts subject to a business diversity program. This is a critical element of narrowly tailoring the programs, so that the burden on non-M/W/DBEs is no more than necessary to achieve the Airport's remedial purposes. Increased participation through race-neutral measures by M/W/DBEs on all contracts regardless of funding source and ACDBEs on concession opportunities will also reduce the need to set contract goals.

### 1. Ensure Prompt Payment of Prime Vendors and Subcontractors

Complaints about slow payments came from all types of firms. This seemed to be a universal concern, mostly unrelated to race or gender status. It is, however, especially problematic for M/W/DBEs and other small firms. Prime contractors reported that slow payment by the agency means they sometimes have to finance their subcontractors to ensure the prime meets its D/M/WBE goals. One recommendation is that the Airport pay the prime contractor for the work the subcontractor has satisfactorily performed, even if all the other subs and/or the prime contractor cannot yet invoice for their work or DFW has not yet approved payment for those line items. This removes the risk from the subcontractors of issues unrelated to their performance or factors outside their control and eliminates delays that could result in extreme financial distress for small firms. This will, however, require a system that permits prime contractors to submit partial invoices, which will be some additional burden on the Airport and prime vendors.

### 2. Increase Contract "Unbundling"

Airport projects are often very large and complex. Not surprisingly, this was reported to be a disincentive to small firms to seek DFW contracts. Unbundling projects, providing longer lead times and simplifying requirements would assist smaller businesses to take on some Airport work. In conjunction with reduced insurance and bonding requirements where possible, unbundled contracts should permit smaller firms to move from quoting solely as subcontractors to bidding as prime contractors, as well as enhance their subcontracting opportunities. On call contracts were one vehicle mentioned as a way to involve smaller firms. Unbundling must be conducted, however, within the constraints of the need to ensure efficiency and limit costs to taxpayers.

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236. The term race-neutral as used here includes gender-neutrality.

### **3. Review Contracting Requirements**

Many business owners and stakeholders, M/W/DBEs and non-M/W/DBEs alike, agreed that the Airport's contracting processes were burdensome and cumbersome and act as disincentives for smaller firms to work as prime vendors or subcontractors. Excessive and needlessly complicated Request for Proposal requirements, invoicing processes and overly bureaucratic policies advantage large, national firms. We suggest the Airport undertake an overall review of its contracting policies with an eye towards reducing complexities and simplifying procedures.

### **4. Provide Additional Training to Prime Bidders on Program Compliance**

Many prime vendors believed that the programs' goals function as rigid requirements, and that the submission of good faith efforts documentation would not be accepted. This is not accurate, but this widespread perception should be directly addressed. The Airport could provide targeted training on the requirements for all aspects of compliance, including the standards for submitting and approving submissions that do not meet the contract goal and reporting utilization of certified firms, so that bidders understand that the programs are in fact flexible.

### **5. Ensure Bidder Non-Discrimination and Fairly Priced Subcontractor Quotations**

Some M/W/DBEs voiced concerns that prime contractors may not be soliciting their subcontractor quotes in good faith on DFW projects or fail to solicit them at all on non-goals projects. Many prime contractors reported that using certified firms increases their costs and risks, and that MWDBEs sometimes inflate bids because they assume they must be utilized.

To investigate these claims, the Airport could require bidders to maintain all subcontractor quotes received on specified projects. Compliance could be treated as an element of maintaining prequalification or of being deemed a responsible bidder. At the Airport's discretion, the prices and scopes could then be compared to evaluate whether bidders are in fact soliciting and contracting with subcontractors on a non-discriminatory basis and if MWDBEs cost more than White-male owned firms.<sup>237</sup>

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237. A similar program element was part of the court-approved DBE plan for the Illinois Department of Transportation. *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2005 U.S. Dist. LEXIS 19868, at \* 87 (Sept. 8, 2005) ("IDOT requires contractors seeking prequalification to maintain and produce solicitation records on all projects... Such evidence will assist IDOT in investigating and evaluating discrimination complaints.").

## 6. Develop a Bonding and Financing Program for M/W/D/SBEs

Access to bonding and working capital are the two of largest barriers to the development and success of M/W/DBEs and small firms because traditional underwriting standards have often excluded them. The size and complexity of Airport projects increases this barrier. One approach that has proven to be effective for some agencies is to develop an Airport-sponsored bonding and financing assistance program for certified firms. This goes beyond the provision of information about outside bonding resources to providing actual assistance to firms through a program consultant; it is not, however, a bonding guarantee program that places the Airport's credit at risk or provides direct subsidies to participants. Rather, this concept brings the commitment of a surety company to provide a bond for firms that have successfully completed the program. Other agencies have reported significant increases in M/W/DBEs' bonding capacities and ability to take on larger projects using this type of program. Such a program could be implemented in conjunction with other local agencies to reduce costs and increase participation.

## B. Continue to Implement Narrowly Tailored DBE and ACDBE Programs

### 1. Use the Study to Set the Triennial DBE Goal and Contract Goals

49 C.F.R. Part 26 requires DFW to engage in a two-step process to set a triennial goal for DBE participation in its federally funded projects. To determine the Step 1 base figure for the relative availability of DBEs required by § 26.45(c), we suggest the Airport use the DBE weighted availability findings for FAA funded contracts.<sup>238</sup> Our custom census is the only approach that has received repeated judicial approval.

To perform the Step 2 analysis required by § 26.45(d) to adjust the Step 1 figure to reflect the level of DBE availability that would be expected in the absence of discrimination, DFW can use the statistical disparities in Chapter V, the rates at which DBEs form businesses. This is the type of "demonstrable evidence that is logically and directly related to the effect for which the adjustment is sought."<sup>239</sup>

The highly detailed unweighted availability estimates in Chapter IV can serve as the starting point for narrowly tailored contract goal setting that reflects the percentage of available DBEs as a percentage of the total pool of available

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238. Table 4-22, Aggregated Weighted Availability for FAA Funded Contracts.

239. 49 CFR § 26.45(d)(3); *see also* §23.51.



firms.<sup>240</sup> The Airport should weigh the estimated scopes of the contract by the availability of DBEs in those scopes, and then adjust the result based on geography and current market conditions (for example, the volume of work currently underway in the market, the entrance of newly certified firms, specialized nature of the project, etc.).

The B2Gnow electronic data collection and monitoring system contains a contract goal setting module developed to utilize the study's unweighted availability data as the starting point. Written procedures based on the study results detailing the implementation of contract goal setting should be developed and disseminated so that all contracting actors understand the methodology.

## **2. Use the Study to Set the ACDBE Triennial and Contract Goals**

Likewise, the study's weighted availability estimates should serve as the Step 1 basis for the car rental ACDBE triennial goal<sup>241</sup> and the non-car rental ACDBE triennial goal.<sup>242</sup> DFW can use the statistical disparities in Chapter V for the Step 2 analysis. The detailed unweighted availability data should be used as the starting point for contract goal setting.<sup>243</sup> CHA has worked with B2Gnow to develop an interface between the study data and the system, to assist agencies to use the unweighted availability estimates in Chapter IV as the first step in contract goal setting. Written procedures based on the study results detailing the implementation of contract goal setting should be developed and disseminated so that all contracting actors understand the methodology.

## **3. Permit All Forms of ACDBE Utilization**

Under a prior administration, the Airport implemented a policy that the only ACDBE utilization that could be counted towards ACDBE contract goals was through a joint venture relationship. Subleasing space to ACDBEs and the use of suppliers were not credited. This has resulted in constrained opportunities for ACDBEs, as they are not afforded the opportunity to manage and control their own locations. We also note that there is no such limitation in Part 23. We therefore recommend that the Airport encourage all forms of contractual relationships, not only joint ventures. This will require that DFW educate concessionaires to ensure that proposers understand that the use of subtenant leases and purchasing goods from certified suppliers also will fully count towards meeting the goals.

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240. Table 4-20, Unweighted Availability for FAA Funded Contracts.

241. Table 4-38, Aggregated Weighted Availability for Car Rental Concession Contracts.

242. Table 4-30, Aggregated Weighted Availability for Non-Car Rental Concession Contracts.

243. Table 4-36, Unweighted Availability for Car Rental Concession Contracts and Table 4-28, Unweighted Availability for Non-Car Rental Concession Contracts.

## C. Revise the M/WBE Program

The current SBE Program was created in response to the 2010 Availability and Disparity Study. Because that study did not provide a strong basis in evidence for setting race- and gender-conscious contract goals, the Airport adopted the SBE program. This Study's results support the determination that the Airport has a strong basis in evidence to continue to implement a fully race-conscious M/WBE program that includes all groups for race-conscious relief for its locally-funded contracts.

The record—both quantitative and anecdotal—establishes that minorities and White women in DFW's market area continue to experience significant disparities in, and barriers to, their fair and equal access to the agency's non-FAA funded contracts and the aviation, construction and professional services industries in the Dallas Fort Worth area. While all groups did not experience large disparities in their utilization on locally-funded contracts, the overall picture from the quantitative and qualitative data is of continuing barriers on the basis of race and gender and a playing field that is not yet equal for all firms. The experiences of MWDBEs, outside of contracting affirmative action programs, strongly suggests that it is the use of flexible contract goals on DFW projects that has led to these results. That a few firms have managed to "break out" and receive substantial dollars does not mean that the Airport must abandon race- and gender-conscious measures to ensure equal contracting opportunities; to the contrary, that only a handful of firms have received the majority of dollars suggests that continuing efforts to open doors to all contractors, subcontractors and subconsultants is needed. Utilization is the result of DFW's strong administration of the M/WBE program, not the absence of discrimination on the basis of race and gender in the Airport's market area. Without the use of contract goals to level the playing field, DFW might function as a "passive participant" in the "market failure" of discrimination. The continued use of contract goals is therefore warranted and we are confident that DFW can support the use of race- and gender-conscious contract goals on its locally-funded contracts. Therefore, there is no need to continue the separate SBE program, which was based on the old study.

### 1. Use the Study to Set the M/WBE Annual and Contract Goals

As with the DBE and ACDBE programs, the weighted availability estimate in Chapter IV<sup>244</sup> should be the basis for DFW's overall annual, aspirational goal for its non-FAA funded contracts. The unweighted estimates<sup>245</sup> can serve as the basis for goal setting using the B2Gnow electronic data collection and monitoring system, as with the DBE and ACDBE program goals.

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244. Table 4-10, Aggregated Weighted Availability for Non-FAA Funded Contracts.

245. Table 4-8, Unweighted Availability for Non-FAA Funded Contracts.

We do not advise grouping contracts into broad categories (*e.g.*, “construction”, “professional services” and “goods and services”) for goal setting. First, these categories are somewhat arbitrary and do not follow the industry structure of the study data. For example, “construction” is NAICS sector 23. However, goods and services that many people might categorize as “construction” are in different sectors: landscaping is sector 56 (services to buildings and dwellings), concrete manufacturing is sector 32 (manufacturing), local trucking is sector 48 (truck transportation), and so on. Next, category goals or targets do not harmonize with the DBE and ACDBE programs, which can lead to confusion and errors. Third, it is best to remove the temptation to use a category goal “shortcut”, rather than engage in the constitutionally required narrowly tailored goal setting the study data and the B2Gnow system support.

## **2. Include All Racial and Ethnic Minority Groups and White Women in the Program**

The Airport’s earlier disparity study recommended that White women be dropped from the MBE program, based on findings that this group did not suffer sufficient discrimination to continue to receive the program’s remedial benefits. Our new research establishes that sexism continues to impede the opportunities for White females, and they do not enjoy a level playing field with non-WBEs and large firms. While the overall disparity ratio is greater than 80 percent for this group, the economy-wide and anecdotal evidence establishes that market intervention is warranted.

This is also true for Hispanics. As discussed in Chapter IV, Hispanic business activity is highly concentrated in a very small number of firms: two firms received almost 46 percent of the dollars in one major NAICS code; two firms received 85 percent of the dollars in a second major NAICS codes; and three firms received over 54 percent of the dollars in a third major NAICS code. These results do not, however, present a picture of equal opportunities for Hispanic-owned businesses, as most other Hispanic-owned businesses received few contracts. That a few firms have moved into performing larger contracts as prime contractors does not mean that the majority of firms face a level playing field.

## **3. Adopt a Personal Net Worth Test and a Business Size Limit**

DFW does not impose a personal net worth or size restriction in its local program, so it should consider adopting such tests (which have been important to the courts’ unanimous rulings that the USDOT DBE program is constitutional) for its local program.

#### **4. Permit Individual Determinations of Social Disadvantage**

To ensure that all forms of discrimination are addressed, the Airport should revise its policy to adopt the standards of Appendix E to 49 C.F.R. Part 26 governing determinations of social disadvantage on an individual basis for firms owned by person not member of the presumptively disadvantaged groups (*i.e.*, Blacks, Hispanics, Asians, Native Americans and White females). This will permit firms owned by persons with disabilities, military veterans, Arab Americans, gay White males, transgender individuals, and others to be certified where they met the criteria established in the regulation. Evidence of individual social disadvantage must include the following elements:

- At least one objective distinguishing feature that has contributed to social disadvantage not common to individuals who are not socially disadvantaged.
- Personal experiences of substantial and chronic social disadvantage in American society.
- Negative impact on entry into or advancement in the business world because of the disadvantage.
- Educational barriers.
- Employment barriers.
- Business barriers.

As discussed in Chapter II, the courts have unanimously upheld the regulations in Part 26, and this framework will provide an avenue for anyone suffering discriminatory barriers to DFW contracting opportunities to access the benefits of the remedial program.

#### **5. Limit Program Eligibility to Firms Located in the Study's Market Area**

As discussed in Chapter II, a local program must limit its reach to its geographic market area. We recommend DFW limit eligibility to firms with a physical place of business in the market area established by the study: Dallas, Tarrant, Denton, and Collin Counties. Firms located outside this area could establish their eligibility by demonstrating that they have attempted to do business in this area through efforts such as submitting bids/proposals, attending marketing events, or other indicia of their desire to do business in the Airport's market area.

## 6. Adopt a Pilot Mentor-Protégé Program

DFW should consider adopting a pilot Mentor-Protégé Program (“MPP”) for M/WBEs. We suggest starting with construction firms, as that is the industry in which these programs have been mostly implemented and for which there are successful examples. An excellent national model is provided in the DBE program regulations at 49 C.F.R. § 26.35 and the Guidelines of Appendix D to Part 26. In addition to the standards provided in Part 26, the General Counsel’s Office at the USDOT has provided some additional guidance<sup>246</sup>, and the USDOT’s Office of Small Disadvantaged Business Utilization has adopted a pilot program<sup>247</sup> and has drafted sample documents.<sup>248</sup>

M/WBEs and several large prime contractors described the need to increase M/WBEs’ capacities. Skill sets such as estimating, understanding of and adherence to specifications, billing and scheduling, accounting, safety, marketing, and meeting prequalification standards are possible areas of focus.

The following elements reflect best practices:

- A description of the qualifications of the mentor, including the firm’s number of years of experience as a construction contractor or consultant; the agreement to devote a specified number of hours per month to working with the protégé; and the qualifications of the lead individual responsible for implementing the development plan.
- A description of the qualifications of the protégé, including the firm’s number of years of experience as a construction contractor or consultant; the agreement to devote a specified number of hours per month to working with the mentor; and the qualifications of the M/WBE owner(s).
- An Airport-approved written development plan, which clearly sets forth the objectives of the parties and their respective roles, the duration of the arrangement, a schedule for meetings and development of action plans, and the services and resources to be provided by the mentor to the protégé. The assistance provided by the mentor must be detailed and directly relevant to DFW projects. The development targets should be quantifiable and verifiable— such as increased bonding capacity, increased sales, increased areas of work specialty or prequalification, etc.— and reflect objectives that increase the protégé’s capacities and expand its business areas and expertise.

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246. <https://www.transportation.gov/civil-rights/disadvantaged-business-enterprise/official-questions-and-answers-qas-disadvantaged>.

247. <https://www.transportation.gov/osdbu/procurement-assistance/mentor-protege-pilot-program>.

248. <https://www.transportation.gov/small-business/procurement-assistance/mentor-protege-program-sample-agreement-1>.

- A long term and specific commitment between the parties, *e.g.*, 12 to 36 months.
- The use of any equipment or equipment rental must be detailed in the plan, and should be further covered by bills of sale, lease agreements, etc., and require prior written approval by the Airport.
- Any financial assistance by the mentor to the protégé must be subject to prior written approval by DFW and must not permit the mentor to assume control of the protégé.
- A fee schedule to cover the direct and indirect cost for services provided by the mentor for specific training and assistance to the protégé.
- The development plan must contain a provision that it may be terminated by mutual consent or by the Airport if the protégé no longer meets the eligibility standards for M/WBE certification; either party desires to be removed from the relationship; either party has failed or is unable to meet its obligations under the plan; the protégé is not progressing or is not likely to progress in accordance with the plan; the protégé has reached a satisfactory level of self-sufficiency to compete without resorting to the plan; or the plan or its provisions are contrary to legal requirements.
- Submission of quarterly reports by the parties indicating their progress toward each of the plan's goals.
- Regular review by the Airport of compliance with the plan and progress towards meeting its objectives. Failure to adhere to the terms of the plan or to make satisfactory progress would be grounds for termination from the program.

We recognize that this level of direction and oversight will require additional resources from BDDD and relevant user departments. Close monitoring of the program will be critical, but other entities have reported success with such an approved approach.

## **7. Develop Performance Measures for Program Success**

DFW should develop quantitative performance measures for certified firms and the overall success of the program to evaluate its effectiveness in reducing the systemic barriers identified by the study. In addition to meeting the annual goal(s), possible benchmarks might be:

- The number of bids or proposals and the dollar amount of the awards, and the goal shortfall where the bidder submitted good faith efforts to meet the contract goal;

- The number and dollar amount of bids or proposals rejected as non-responsive for failure to make good faith efforts to meet the goal;
- The number, type, and dollar amount of M/WBE substitutions during contract performance;
- Increased bidding by certified firms;
- Increased prime contract awards to certified firms; and
- Increased “capacity” of certified firms as measured by bonding limits, size of jobs, profitability, etc.





# APPENDIX A:

## FURTHER EXPLANATION OF THE MULTIPLE REGRESSION ANALYSIS

As explained in the Report, the multiple regression statistical techniques seek to explore the relationship between a set of independent variables and a dependent variable. The following equation is a way to visualize this relationship:

$$DV = f(D, I, O),$$

where DV is the dependent variable; D is a set of demographic variables; I is a set of industry and occupation variables; and O is a set of other independent variables.

The estimation process takes this equation and transforms it into:

$$DV = C + (\beta_1 * D) + (\beta_2 * I) + (\beta_3 * O) + \mu,$$

where C is the constant term;  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  are coefficients, and  $\mu$  is the random error term.

The statistical technique seeks to estimate the values of the constant term and the coefficients.

In order to complete the estimation, the set of independent variables must be operationalized. For demographic variables, the estimation used race, gender and age. For industry and occupation variables, the relevant industry and occupation were utilized. For the other variables, age and education were used.

A coefficient was estimated for each independent variable. The broad idea is that a person's wage or earnings is dependent upon the person's race, gender, age, industry, occupation, and education. Since this Report examined the State of Texas, the analysis was limited to data from the State. The coefficient for the new variable showed the impact of being a member of that race or gender in the State of Texas.



# APPENDIX B:

## FURTHER EXPLANATION OF THE PROBIT REGRESSION ANALYSIS

Probit regression is a special type of regression analysis. While there are many differences between the underlying estimation techniques used in the probit regression and the standard regression analysis, the main differences, from the layperson's point of view, lie in the nature of the dependent variable and the interpretation of the coefficients associated with the independent variables.

The basic model looks the same:

$$DV = f(D, I, O),$$

where DV is the dependent variable; D is a set of demographic variables; I is a set of industry & occupation variables; and O is a set of other independent variables.

The estimation process takes this equation and transforms it into:

$$DV = C + (\beta_1 * D) + (\beta_2 * I) + (\beta_3 * O) + \mu,$$

where C is the constant term;  $\beta_1$ ,  $\beta_2$ , and  $\beta_3$  are coefficients, and  $\mu$  is the random error term.

In the standard regression model, the dependent variable is continuous and can take on many values. In the probit model, the dependent variable is dichotomous and can take on only two values: zero or one. For instance, in the standard regression analysis, we may be exploring the impact of a change in some independent variable on wages. In this case, the value of one's wage might be any non-negative number. In contrast, in the probit regression analysis, the exploration might be the impact of a change in some independent variable on the probability that some event occurs. For instance, the question might be how an individual's gender impacts the probability of that person forming a business. In this case, the dependent variable has two values: zero, if a business is not formed; one, if a business is formed.

The second significant difference – the interpretation of the independent variables' coefficients – is fairly straight-forward in the standard regression model: the unit change in the independent variable impacts the dependent variable

by the amount of the coefficient.<sup>249</sup> However, in the probit model, the initial coefficients cannot be interpreted this way. One additional step - which can be computed easily by most statistical packages - must be undertaken in order to yield a result that indicates how the change in the independent variable affects the probability of an event (*e.g.*, business formation) occurs. For instance, using our previous example of the impact on gender on business formation, if the independent variable was WOMAN (with a value of 0 if the individual was male and 1 if the individual was female) and the final transformation of the coefficient of WOMAN was -0.12, we would interpret this to mean that women have a 12 percent lower probability of forming a business compared to men.

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249. The exact interpretation depends upon the functional form of the model.

# APPENDIX C:

## SIGNIFICANCE LEVELS

Many tables in this Report contain asterisks indicating a number has statistical significance at 0.001 or 0.01 levels and the body of the report repeats these descriptions. While the use of the term seems important, it is not self-evident what the term means. This Appendix provides a general explanation of significance levels.

This Report seeks to address the question whether non-Whites and White women received disparate treatment in the economy relative to White males. From a statistical viewpoint, this primary question has two sub-questions:

- What is the relationship between the independent variable and the dependent variable?
- What is the probability that the relationship between the independent variable and the dependent variable is equal to zero?

For example, an important question facing DFW as it explores whether each racial and ethnic group and White women continues to experience discrimination in its markets is do non-Whites and White women receive lower wages than White men? As discussed in Appendix A, one way to uncover the relationship between the dependent variable (*e.g.*, wages) and the independent variable (*e.g.*, non-Whites) is through multiple regression analysis. An example helps to explain this concept.

Let us say this analysis determines that non-Whites receive wages that are 35 percent less than White men after controlling for other factors, such as education and industry, which might account for the differences in wages. However, this finding is only an estimate of the relationship between the independent variable (*e.g.*, non-Whites) and the dependent variable (*e.g.*, wages) – the first sub-question. It is still important to determine how accurate is that estimation, that is, what is the probability the estimated relationship is equal to zero – the second sub-question.

To resolve the second sub-question, statistical hypothesis tests are utilized. Hypothesis testing assumes that there is no relationship between belonging to a particular demographic group and the level of economic utilization relative to White men (*e.g.*, non-Whites earn identical wages compared to White men or non-Whites earn 0 percent less than White men). This sometimes called the null hypothesis. We then calculate a confidence interval to find explore the

probability that the observed relationship (*e.g.*, - 35 percent) is between 0 and minus that confidence interval.<sup>250</sup> The confidence interval will vary depending upon the level of confidence (statistical significance) we wish to have in our conclusion. Hence, a statistical significance of 99 percent would have a broader confidence interval than statistical significance of 95 percent. Once a confidence interval is established, if -35 percent lies outside of that interval, we can assert the observed relationship (*e.g.*, 35 percent) is accurate at the appropriate level of statistical significance.

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250. Because 0 can only be greater than -35 percent, we only speak of “minus the confidence level”. This is a one-tailed hypothesis test. If, in another example, the observed relationship could be above or below the hypothesized value, then we would say “plus or minus the confidence level” and this would be a two-tailed test.

# APPENDIX D:

## ADDITIONAL DATA FROM THE UTILIZATION ANALYSES FOR THE DALLAS FORT WORTH INTERNATIONAL AIRPORT<sup>251</sup>

**Table D-1: Industry Percentage Distribution of Contracts by Dollars Paid  
Non-FAA Funded Contracts, All Contracts**

| NAICS  | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|--|----------------------------|---------------------------------------|
| 236220 | Commercial and Institutional Building Construction               | 21.30101%                  | 21.30101%                             |
| 238210 | Electrical Contractors and Other Wiring Installation Contractors | 17.30689%                  | 38.60790%                             |
| 238120 | Structural Steel and Precast Concrete Contractors                | 10.00641%                  | 48.61431%                             |
| 238220 | Plumbing, Heating, and Air-Conditioning Contractors              | 9.94278%                   | 58.55709%                             |
| 238310 | Drywall and Insulation Contractors                               | 4.23974%                   | 62.79683%                             |
| 562910 | Remediation Services   | 3.99490%                   | 66.79173%                             |
| 238910 | Site Preparation Contractors                                     | 3.79738%                   | 70.58911%                             |
| 541330 | Engineering Services   | 3.49880%                   | 74.08792%                             |
| 488119 | Other Airport Operations   | 2.74619%                   | 76.83411%                             |
| 236210 | Industrial Building Construction                                 | 1.45539%                   | 78.28949%                             |
| 238130 | Framing Contractors  | 1.42016%                   | 79.70966%                             |
| 238150 | Glass and Glazing Contractors                                    | 1.31094%                   | 81.02059%                             |
| 237310 | Highway, Street, and Bridge Construction                         | 1.18936%                   | 82.20996%                             |

251. A breakdown of the unconstrained product market by Prime and Subcontractor data is not provided for FAA-funded contracts because there are only 46 contracts in the data set. A breakdown of Non-Car Rental Contracts by Prime and Subcontractor is not provided because the ACDBEs functioned as joint venture partners.

Dallas Fort Worth International Airport Disparity Study 2019

| NAICS  | NAICS Code Description  | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|---|----------------------------|---------------------------------------|
| 238290 | Other Building Equipment Contractors  | 0.93438%                   | 83.14434%                             |
| 561320 | Temporary Help Services   | 0.90240%                   | 84.04673%                             |
| 561990 | All Other Support Services  | 0.77735%                   | 84.82409%                             |
| 237110 | Water and Sewer Line and Related Structures Construction  | 0.70814%                   | 85.53223%                             |
| 444190 | Other Building Material Dealers   | 0.69131%                   | 86.22354%                             |
| 238320 | Painting and Wall Covering Contractors  | 0.62632%                   | 86.84986%                             |
| 423610 | Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers | 0.60424%                   | 87.45409%                             |
| 238350 | Finish Carpentry Contractors  | 0.56852%                   | 88.02262%                             |
| 238160 | Roofing Contractors   | 0.50643%                   | 88.52905%                             |
| 812930 | Parking Lots and Garages  | 0.47215%                   | 89.00120%                             |
| 339950 | Sign Manufacturing  | 0.47103%                   | 89.47222%                             |
| 238390 | Other Building Finishing Contractors  | 0.44489%                   | 89.91711%                             |
| 333921 | Elevator and Moving Stairway Manufacturing  | 0.43720%                   | 90.35431%                             |
| 238140 | Masonry Contractors   | 0.41636%                   | 90.77067%                             |
| 541620 | Environmental Consulting Services   | 0.39668%                   | 91.16734%                             |
| 238330 | Flooring Contractors  | 0.34206%                   | 91.50941%                             |
| 541618 | Other Management Consulting Services  | 0.33541%                   | 91.84482%                             |
| 541690 | Other Scientific and Technical Consulting Services  | 0.33356%                   | 92.17838%                             |
| 524126 | Direct Property and Casualty Insurance Carriers   | 0.29971%                   | 92.47808%                             |
| 238340 | Tile and Terrazzo Contractors   | 0.29437%                   | 92.77245%                             |
| 485111 | Mixed Mode Transit Systems  | 0.29357%                   | 93.06602%                             |
| 518210 | Data Processing, Hosting, and Related Services  | 0.29316%                   | 93.35918%                             |
| 238990 | All Other Specialty Trade Contractors   | 0.28761%                   | 93.64679%                             |
| 237130 | Power and Communication Line and Related Structures Construction                                | 0.25868%                   | 93.90548%                             |
| 561730 | Landscaping Services  | 0.25335%                   | 94.15883%                             |
| 541310 | Architectural Services  | 0.23008%                   | 94.38891%                             |



| NAICS  | NAICS Code Description  | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|---|----------------------------|---------------------------------------|
| 332311 | Prefabricated Metal Building and Component Manufacturing                              | 0.21708%                   | 94.60599%                             |
| 485113 | Bus and Other Motor Vehicle Transit Systems   | 0.21625%                   | 94.82224%                             |
| 484220 | Specialized Freight (except Used Goods) Trucking, Local                               | 0.21144%                   | 95.03368%                             |
| 541512 | Computer Systems Design Services  | 0.20374%                   | 95.23742%                             |
| 561330 | Professional Employer Organizations   | 0.19631%                   | 95.43373%                             |
| 541219 | Other Accounting Services   | 0.19353%                   | 95.62726%                             |
| 334220 | Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing | 0.19310%                   | 95.82037%                             |
| 332323 | Ornamental and Architectural Metal Work Manufacturing                                 | 0.17660%                   | 95.99697%                             |
| 485999 | All Other Transit and Ground Passenger Transportation                                 | 0.17499%                   | 96.17196%                             |
| 561621 | Security Systems Services (except Locksmiths)   | 0.16821%                   | 96.34017%                             |
| 423720 | Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers          | 0.16796%                   | 96.50813%                             |
| 324199 | All Other Petroleum and Coal Products Manufacturing                                   | 0.15609%                   | 96.66422%                             |
| 332999 | All Other Miscellaneous Fabricated Metal Product Manufacturing                        | 0.15294%                   | 96.81716%                             |
| 541613 | Marketing Consulting Services   | 0.14252%                   | 96.95968%                             |
| 811412 | Appliance Repair and Maintenance  | 0.13432%                   | 97.09400%                             |
| 561720 | Janitorial Services   | 0.12296%                   | 97.21696%                             |
| 238190 | Other Foundation, Structure, and Building Exterior Contractors                        | 0.11656%                   | 97.33352%                             |
| 541611 | Administrative Management and General Management Consulting Services                  | 0.10434%                   | 97.43786%                             |
| 928120 | International Affairs   | 0.10407%                   | 97.54193%                             |
| 541380 | Testing Laboratories  | 0.09400%                   | 97.63593%                             |
| 517311 | Wired Telecommunications Carriers   | 0.09133%                   | 97.72726%                             |
| 541519 | Other Computer Related Services   | 0.09054%                   | 97.81781%                             |
| 333923 | Overhead Traveling Crane, Hoist, and Monorail System Manufacturing                    | 0.09040%                   | 97.90821%                             |

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| NAICS  | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|--|----------------------------|---------------------------------------|
| 327320 | Ready-Mix Concrete Manufacturing   | 0.08498%                   | 97.99319%                             |
| 488190 | Other Support Activities for Air Transportation  | 0.08043%                   | 98.07361%                             |
| 541110 | Offices of Lawyers   | 0.07863%                   | 98.15225%                             |
| 334512 | Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use | 0.07582%                   | 98.22807%                             |
| 562998 | All Other Miscellaneous Waste Management Services  | 0.07438%                   | 98.30245%                             |
| 332312 | Fabricated Structural Metal Manufacturing  | 0.07072%                   | 98.37317%                             |
| 424710 | Petroleum Bulk Stations and Terminals  | 0.07070%                   | 98.44387%                             |
| 334290 | Other Communications Equipment Manufacturing   | 0.06877%                   | 98.51264%                             |
| 562211 | Hazardous Waste Treatment and Disposal   | 0.06831%                   | 98.58094%                             |
| 336413 | Other Aircraft Parts and Auxiliary Equipment Manufacturing                                   | 0.06485%                   | 98.64579%                             |
| 314910 | Textile Bag and Canvas Mills   | 0.06317%                   | 98.70895%                             |
| 237990 | Other Heavy and Civil Engineering Construction   | 0.05866%                   | 98.76762%                             |
| 561612 | Security Guards and Patrol Services  | 0.05837%                   | 98.82599%                             |
| 541850 | Outdoor Advertising  | 0.05529%                   | 98.88128%                             |
| 541511 | Custom Computer Programming Services   | 0.05510%                   | 98.93638%                             |
| 541410 | Interior Design Services   | 0.05261%                   | 98.98899%                             |
| 423690 | Other Electronic Parts and Equipment Merchant Wholesalers                                    | 0.04550%                   | 99.03449%                             |
| 327215 | Glass Product Manufacturing Made of Purchased Glass  | 0.04518%                   | 99.07967%                             |
| 541320 | Landscape Architectural Services   | 0.04470%                   | 99.12437%                             |
| 541614 | Process, Physical Distribution, and Logistics Consulting Services                            | 0.04285%                   | 99.16722%                             |
| 332313 | Plate Work Manufacturing   | 0.03979%                   | 99.20701%                             |
| 424120 | Stationery and Office Supplies Merchant Wholesalers  | 0.03770%                   | 99.24472%                             |
| 333922 | Conveyor and Conveying Equipment Manufacturing   | 0.03752%                   | 99.28223%                             |
| 423840 | Industrial Supplies Merchant Wholesalers   | 0.03489%                   | 99.31712%                             |
| 423320 | Brick, Stone, and Related Construction Material Merchant Wholesalers                         | 0.03467%                   | 99.35180%                             |

| NAICS  | NAICS Code Description  | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|---|----------------------------|---------------------------------------|
| 423850 | Service Establishment Equipment and Supplies Merchant Wholesalers   | 0.03179%                   | 99.38358%                             |
| 562119 | Other Waste Collection  | 0.03001%                   | 99.41359%                             |
| 532420 | Office Machinery and Equipment Rental and Leasing   | 0.02873%                   | 99.44232%                             |
| 325998 | All Other Miscellaneous Chemical Product and Preparation Manufacturing                                      | 0.02862%                   | 99.47094%                             |
| 423830 | Industrial Machinery and Equipment Merchant Wholesalers   | 0.02790%                   | 99.49883%                             |
| 712110 | Museums   | 0.02500%                   | 99.52383%                             |
| 424720 | Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)                  | 0.02500%                   | 99.54883%                             |
| 541612 | Human Resources Consulting Services   | 0.02428%                   | 99.57311%                             |
| 335129 | Other Lighting Equipment Manufacturing  | 0.02274%                   | 99.59586%                             |
| 811310 | Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance | 0.02149%                   | 99.61735%                             |
| 337212 | Custom Architectural Woodwork and Millwork Manufacturing  | 0.02147%                   | 99.63882%                             |
| 541820 | Public Relations Agencies   | 0.02009%                   | 99.65891%                             |
| 561613 | Armored Car Services  | 0.01936%                   | 99.67827%                             |
| 541370 | Surveying and Mapping (except Geophysical) Services   | 0.01926%                   | 99.69753%                             |
| 541211 | Offices of Certified Public Accountants   | 0.01920%                   | 99.71673%                             |
| 423210 | Furniture Merchant Wholesalers  | 0.01739%                   | 99.73412%                             |
| 332322 | Sheet Metal Work Manufacturing  | 0.01717%                   | 99.75129%                             |
| 424690 | Other Chemical and Allied Products Merchant Wholesalers   | 0.01692%                   | 99.76822%                             |
| 454390 | Other Direct Selling Establishments   | 0.01567%                   | 99.78389%                             |
| 532412 | Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing                               | 0.01457%                   | 99.79846%                             |
| 333318 | Other Commercial and Service Industry Machinery Manufacturing   | 0.01395%                   | 99.81241%                             |
| 562991 | Septic Tank and Related Services  | 0.01311%                   | 99.82552%                             |

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| NAICS  | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|--|----------------------------|---------------------------------------|
| 115310 | Support Activities for Forestry  | 0.01266%                   | 99.83818%                             |
| 332812 | Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers | 0.01207%                   | 99.85025%                             |
| 423430 | Computer and Computer Peripheral Equipment and Software Merchant Wholesalers                   | 0.01166%                   | 99.86191%                             |
| 541350 | Building Inspection Services   | 0.01126%                   | 99.87317%                             |
| 333120 | Construction Machinery Manufacturing   | 0.00987%                   | 99.88304%                             |
| 532490 | Other Commercial and Industrial Machinery and Equipment Rental and Leasing                     | 0.00942%                   | 99.89245%                             |
| 423390 | Other Construction Material Merchant Wholesalers   | 0.00762%                   | 99.90007%                             |
| 561311 | Employment Placement Agencies  | 0.00743%                   | 99.90750%                             |
| 532120 | Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing                       | 0.00711%                   | 99.91462%                             |
| 423440 | Other Commercial Equipment Merchant Wholesalers  | 0.00690%                   | 99.92151%                             |
| 213111 | Drilling Oil and Gas Wells   | 0.00600%                   | 99.92752%                             |
| 541910 | Marketing Research and Public Opinion Polling  | 0.00503%                   | 99.93255%                             |
| 453998 | All Other Miscellaneous Store Retailers (except Tobacco Stores)                                | 0.00435%                   | 99.93689%                             |
| 237120 | Oil and Gas Pipeline and Related Structures Construction                                       | 0.00428%                   | 99.94117%                             |
| 813110 | Religious Organizations  | 0.00387%                   | 99.94504%                             |
| 621493 | Freestanding Ambulatory Surgical and Emergency Centers   | 0.00375%                   | 99.94879%                             |
| 561110 | Office Administrative Services   | 0.00357%                   | 99.95236%                             |
| 454310 | Fuel Dealers   | 0.00327%                   | 99.95563%                             |
| 321992 | Prefabricated Wood Building Manufacturing  | 0.00305%                   | 99.95868%                             |
| 444110 | Home Centers   | 0.00291%                   | 99.96159%                             |
| 221122 | Electric Power Distribution  | 0.00285%                   | 99.96444%                             |
| 561622 | Locksmiths   | 0.00284%                   | 99.96728%                             |
| 423810 | Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers         | 0.00275%                   | 99.97003%                             |
| 237210 | Land Subdivision   | 0.00251%                   | 99.97254%                             |

| NAICS  | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|--|----------------------------|---------------------------------------|
| 212313 | Crushed and Broken Granite Mining and Quarrying                | 0.00227%                   | 99.97481%                             |
| 541720 | Research and Development in the Social Sciences and Humanities | 0.00211%                   | 99.97692%                             |
| 423420 | Office Equipment Merchant Wholesalers                          | 0.00209%                   | 99.97901%                             |
| 321911 | Wood Window and Door Manufacturing                             | 0.00164%                   | 99.98065%                             |
| 114210 | Hunting and Trapping   | 0.00154%                   | 99.98219%                             |
| 327390 | Other Concrete Product Manufacturing                           | 0.00153%                   | 99.98372%                             |
| 423490 | Other Professional Equipment and Supplies Merchant Wholesalers | 0.00152%                   | 99.98524%                             |
| 323111 | Commercial Printing (except Screen and Books)                  | 0.00139%                   | 99.98662%                             |
| 326199 | All Other Plastics Product Manufacturing                       | 0.00132%                   | 99.98794%                             |
| 337127 | Institutional Furniture Manufacturing                          | 0.00129%                   | 99.98924%                             |
| 562212 | Solid Waste Landfill   | 0.00123%                   | 99.99047%                             |
| 561439 | Other Business Service Centers (including Copy Shops)          | 0.00122%                   | 99.99169%                             |
| 423220 | Home Furnishing Merchant Wholesalers                           | 0.00114%                   | 99.99282%                             |
| 332321 | Metal Window and Door Manufacturing                            | 0.00106%                   | 99.99389%                             |
| 221210 | Natural Gas Distribution                                       | 0.00093%                   | 99.99482%                             |
| 327420 | Gypsum Product Manufacturing                                   | 0.00092%                   | 99.99573%                             |
| 115112 | Soil Preparation, Planting, and Cultivating                    | 0.00085%                   | 99.99658%                             |
| 327991 | Cut Stone and Stone Product Manufacturing                      | 0.00063%                   | 99.99721%                             |
| 561210 | Facilities Support Services                                    | 0.00053%                   | 99.99774%                             |
| 512120 | Motion Picture and Video Distribution                          | 0.00052%                   | 99.99825%                             |
| 811122 | Automotive Glass Replacement Shops                             | 0.00038%                   | 99.99863%                             |
| 488510 | Freight Transportation Arrangement                             | 0.00033%                   | 99.99896%                             |
| 541430 | Graphic Design Services  | 0.00031%                   | 99.99927%                             |
| 517919 | All Other Telecommunications                                   | 0.00018%                   | 99.99946%                             |
| 335931 | Current-Carrying Wiring Device Manufacturing                   | 0.00017%                   | 99.99962%                             |
| 221320 | Sewage Treatment Facilities                                    | 0.00013%                   | 99.99975%                             |
| 562920 | Materials Recovery Facilities                                  | 0.00011%                   | 99.99986%                             |

| NAICS        | NAICS Code Description                                     | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|--|----------------------------|---------------------------------------|
| 561920       | Convention and Trade Show Organizers                       | 0.00009%                   | 99.99995%                             |
| 541990       | All Other Professional, Scientific, and Technical Services | 0.00005%                   | 100.00000%                            |
| <b>TOTAL</b> |  |                            | <b>100.0%</b>                         |

Source: CHA analysis of DFW data

**Table D-2: Industry Percentage Distribution of Contracts by Dollars Paid  
Non-FAA Funded Contracts, Prime Contracts**

| NAICS  | NAICS Code Description  | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|---|----------------------------|---------------------------------------|
| 236220 | Commercial and Institutional Building Construction                                    | 67.7%                      | 67.7%                                 |
| 541330 | Engineering Services  | 8.5%                       | 76.2%                                 |
| 812930 | Parking Lots and Garages  | 2.7%                       | 78.9%                                 |
| 236210 | Industrial Building Construction  | 2.3%                       | 81.2%                                 |
| 518210 | Data Processing, Hosting, and Related Services  | 1.6%                       | 82.8%                                 |
| 561320 | Temporary Help Services   | 1.5%                       | 84.3%                                 |
| 237130 | Power and Communication Line and Related Structures Construction                      | 1.2%                       | 85.5%                                 |
| 561330 | Professional Employer Organizations   | 1.1%                       | 86.6%                                 |
| 541512 | Computer Systems Design Services  | 1.1%                       | 87.8%                                 |
| 334220 | Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing | 1.1%                       | 88.8%                                 |
| 561621 | Security Systems Services (except Locksmiths)   | 0.95%                      | 89.78%                                |
| 324199 | All Other Petroleum and Coal Products Manufacturing                                   | 0.89%                      | 90.67%                                |
| 541613 | Marketing Consulting Services   | 0.81%                      | 91.48%                                |
| 238390 | Other Building Finishing Contractors  | 0.67%                      | 92.15%                                |
| 928120 | International Affairs   | 0.59%                      | 92.74%                                |
| 488119 | Other Airport Operations  | 0.51%                      | 93.25%                                |
| 541110 | Offices of Lawyers  | 0.45%                      | 93.70%                                |
| 424710 | Petroleum Bulk Stations and Terminals   | 0.40%                      | 94.10%                                |

| NAICS  | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|--|----------------------------|---------------------------------------|
| 561720 | Janitorial Services  | 0.39%                      | 94.49%                                |
| 541519 | Other Computer Related Services  | 0.36%                      | 94.84%                                |
| 488190 | Other Support Activities for Air Transportation                        | 0.33%                      | 95.17%                                |
| 561612 | Security Guards and Patrol Services                                    | 0.32%                      | 95.50%                                |
| 541310 | Architectural Services   | 0.32%                      | 95.81%                                |
| 541410 | Interior Design Services   | 0.30%                      | 96.11%                                |
| 541511 | Custom Computer Programming Services                                   | 0.29%                      | 96.41%                                |
| 238160 | Roofing Contractors  | 0.28%                      | 96.69%                                |
| 541690 | Other Scientific and Technical Consulting Services                     | 0.27%                      | 96.96%                                |
| 327215 | Glass Product Manufacturing Made of Purchased Glass                    | 0.26%                      | 97.22%                                |
| 334290 | Other Communications Equipment Manufacturing                           | 0.19%                      | 97.41%                                |
| 423850 | Service Establishment Equipment and Supplies Merchant Wholesalers      | 0.18%                      | 97.59%                                |
| 541611 | Administrative Management and General Management Consulting Services   | 0.17%                      | 97.76%                                |
| 238290 | Other Building Equipment Contractors                                   | 0.17%                      | 97.93%                                |
| 532420 | Office Machinery and Equipment Rental and Leasing                      | 0.16%                      | 98.09%                                |
| 562998 | All Other Miscellaneous Waste Management Services                      | 0.16%                      | 98.26%                                |
| 325998 | All Other Miscellaneous Chemical Product and Preparation Manufacturing | 0.16%                      | 98.42%                                |
| 424120 | Stationery and Office Supplies Merchant Wholesalers                    | 0.15%                      | 98.57%                                |
| 541612 | Human Resources Consulting Services                                    | 0.14%                      | 98.70%                                |
| 712110 | Museums  | 0.13%                      | 98.83%                                |
| 561613 | Armored Car Services   | 0.11%                      | 98.94%                                |
| 541211 | Offices of Certified Public Accountants                                | 0.11%                      | 99.05%                                |
| 237310 | Highway, Street, and Bridge Construction                               | 0.09%                      | 99.14%                                |
| 454390 | Other Direct Selling Establishments                                    | 0.09%                      | 99.23%                                |
| 339950 | Sign Manufacturing   | 0.08%                      | 99.31%                                |
| 333318 | Other Commercial and Service Industry Machinery Manufacturing          | 0.08%                      | 99.39%                                |

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| NAICS        | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|--|----------------------------|---------------------------------------|
| 423430       | Computer and Computer Peripheral Equipment and Software Merchant Wholesalers | 0.07%                      | 99.46%                                |
| 238220       | Plumbing, Heating, and Air-Conditioning Contractors                          | 0.06%                      | 99.52%                                |
| 333922       | Conveyor and Conveying Equipment Manufacturing                               | 0.06%                      | 99.58%                                |
| 238910       | Site Preparation Contractors   | 0.06%                      | 99.64%                                |
| 541380       | Testing Laboratories   | 0.05%                      | 99.69%                                |
| 541614       | Process, Physical Distribution, and Logistics Consulting Services            | 0.05%                      | 99.74%                                |
| 484220       | Specialized Freight (except Used Goods) Trucking, Local                      | 0.04%                      | 99.78%                                |
| 532490       | Other Commercial and Industrial Machinery and Equipment Rental and Leasing   | 0.03%                      | 99.80%                                |
| 238210       | Electrical Contractors and Other Wiring Installation Contractors             | 0.03%                      | 99.83%                                |
| 453998       | All Other Miscellaneous Store Retailers (except Tobacco Stores)              | 0.02%                      | 99.86%                                |
| 561990       | All Other Support Services   | 0.02%                      | 99.88%                                |
| 562910       | Remediation Services   | 0.02%                      | 99.90%                                |
| 621493       | Freestanding Ambulatory Surgical and Emergency Centers                       | 0.02%                      | 99.92%                                |
| 423390       | Other Construction Material Merchant Wholesalers                             | 0.02%                      | 99.94%                                |
| 423720       | Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers | 0.02%                      | 99.96%                                |
| 561622       | Locksmiths   | 0.02%                      | 99.98%                                |
| 114210       | Hunting and Trapping   | 0.01%                      | 99.99%                                |
| 323111       | Commercial Printing (except Screen and Books)                                | 0.01%                      | 99.99%                                |
| 237990       | Other Heavy and Civil Engineering Construction                               | 0.01%                      | 100.00%                               |
| <b>TOTAL</b> |  |                            | <b>100.0%</b>                         |

Source: CHA analysis of DFW data



**Table D-3: Industry Percentage Distribution of Contracts by Dollars Paid  
Non-FAA Funded Contracts, Subcontracts**

| NAICS  | NAICS Code Description  | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|---|----------------------------|---------------------------------------|
| 238210 | Electrical Contractors and Other Wiring Installation Contractors                                | 21.0052%                   | 21.0052%                              |
| 238120 | Structural Steel and Precast Concrete Contractors   | 12.1480%                   | 33.1532%                              |
| 238220 | Plumbing, Heating, and Air-Conditioning Contractors   | 12.0569%                   | 45.2101%                              |
| 236220 | Commercial and Institutional Building Construction  | 11.3756%                   | 56.5857%                              |
| 238310 | Drywall and Insulation Contractors  | 5.1471%                    | 61.7328%                              |
| 562910 | Remediation Services  | 4.8453%                    | 66.5781%                              |
| 238910 | Site Preparation Contractors  | 4.5983%                    | 71.1764%                              |
| 488119 | Other Airport Operations  | 3.2240%                    | 74.4004%                              |
| 541330 | Engineering Services  | 2.4204%                    | 76.8207%                              |
| 238130 | Framing Contractors   | 1.7241%                    | 78.5448%                              |
| 238150 | Glass and Glazing Contractors   | 1.5915%                    | 80.1363%                              |
| 237310 | Highway, Street, and Bridge Construction  | 1.4240%                    | 81.5603%                              |
| 236210 | Industrial Building Construction  | 1.2650%                    | 82.8254%                              |
| 238290 | Other Building Equipment Contractors  | 1.0989%                    | 83.9243%                              |
| 561990 | All Other Support Services  | 0.9386%                    | 84.8629%                              |
| 237110 | Water and Sewer Line and Related Structures Construction  | 0.8597%                    | 85.7226%                              |
| 444190 | Other Building Material Dealers   | 0.8393%                    | 86.5619%                              |
| 561320 | Temporary Help Services   | 0.7779%                    | 87.3398%                              |
| 238320 | Painting and Wall Covering Contractors  | 0.7604%                    | 88.1001%                              |
| 423610 | Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers | 0.7336%                    | 88.8337%                              |
| 238350 | Finish Carpentry Contractors  | 0.6902%                    | 89.5239%                              |
| 339950 | Sign Manufacturing  | 0.5547%                    | 90.0786%                              |
| 238160 | Roofing Contractors   | 0.5541%                    | 90.6327%                              |
| 333921 | Elevator and Moving Stairway Manufacturing  | 0.5308%                    | 91.1635%                              |
| 238140 | Masonry Contractors   | 0.5055%                    | 91.6689%                              |

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| NAICS  | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|--|----------------------------|---------------------------------------|
| 541620 | Environmental Consulting Services  | 0.4816%                    | 92.1505%                              |
| 238330 | Flooring Contractors   | 0.4153%                    | 92.5658%                              |
| 541618 | Other Management Consulting Services   | 0.4072%                    | 92.9730%                              |
| 238390 | Other Building Finishing Contractors   | 0.3967%                    | 93.3697%                              |
| 524126 | Direct Property and Casualty Insurance Carriers                              | 0.3639%                    | 93.7335%                              |
| 238340 | Tile and Terrazzo Contractors  | 0.3574%                    | 94.0909%                              |
| 485111 | Mixed Mode Transit Systems   | 0.3564%                    | 94.4473%                              |
| 238990 | All Other Specialty Trade Contractors  | 0.3492%                    | 94.7964%                              |
| 541690 | Other Scientific and Technical Consulting Services                           | 0.3465%                    | 95.1429%                              |
| 561730 | Landscaping Services   | 0.3076%                    | 95.4505%                              |
| 332311 | Prefabricated Metal Building and Component Manufacturing                     | 0.2635%                    | 95.7140%                              |
| 485113 | Bus and Other Motor Vehicle Transit Systems                                  | 0.2625%                    | 95.9765%                              |
| 484220 | Specialized Freight (except Used Goods) Trucking, Local                      | 0.2489%                    | 96.2255%                              |
| 541219 | Other Accounting Services  | 0.2349%                    | 96.4604%                              |
| 332323 | Ornamental and Architectural Metal Work Manufacturing                        | 0.2144%                    | 96.6748%                              |
| 485999 | All Other Transit and Ground Passenger Transportation                        | 0.2124%                    | 96.8873%                              |
| 541310 | Architectural Services   | 0.2110%                    | 97.0982%                              |
| 423720 | Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers | 0.1998%                    | 97.2980%                              |
| 332999 | All Other Miscellaneous Fabricated Metal Product Manufacturing               | 0.1857%                    | 97.4837%                              |
| 811412 | Appliance Repair and Maintenance   | 0.1631%                    | 97.6468%                              |
| 238190 | Other Foundation, Structure, and Building Exterior Contractors               | 0.1415%                    | 97.7883%                              |
| 517311 | Wired Telecommunications Carriers  | 0.1109%                    | 97.8992%                              |
| 333923 | Overhead Traveling Crane, Hoist, and Monorail System Manufacturing           | 0.1097%                    | 98.0089%                              |
| 327320 | Ready-Mix Concrete Manufacturing   | 0.1032%                    | 98.1121%                              |

| NAICS  | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|--|----------------------------|---------------------------------------|
| 541380 | Testing Laboratories   | 0.1029%                    | 98.2150%                              |
| 334512 | Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use | 0.0921%                    | 98.3070%                              |
| 541611 | Administrative Management and General Management Consulting Services                         | 0.0898%                    | 98.3968%                              |
| 332312 | Fabricated Structural Metal Manufacturing  | 0.0859%                    | 98.4827%                              |
| 562211 | Hazardous Waste Treatment and Disposal   | 0.0829%                    | 98.5656%                              |
| 336413 | Other Aircraft Parts and Auxiliary Equipment Manufacturing                                   | 0.0787%                    | 98.6443%                              |
| 314910 | Textile Bag and Canvas Mills   | 0.0767%                    | 98.7210%                              |
| 237990 | Other Heavy and Civil Engineering Construction   | 0.0698%                    | 98.7908%                              |
| 541850 | Outdoor Advertising  | 0.0671%                    | 98.8579%                              |
| 561720 | Janitorial Services  | 0.0654%                    | 98.9233%                              |
| 562998 | All Other Miscellaneous Waste Management Services  | 0.0555%                    | 98.9788%                              |
| 423690 | Other Electronic Parts and Equipment Merchant Wholesalers                                    | 0.0552%                    | 99.0340%                              |
| 541320 | Landscape Architectural Services   | 0.0543%                    | 99.0883%                              |
| 237130 | Power and Communication Line and Related Structures Construction                             | 0.0498%                    | 99.1381%                              |
| 332313 | Plate Work Manufacturing   | 0.0483%                    | 99.1864%                              |
| 334290 | Other Communications Equipment Manufacturing   | 0.0424%                    | 99.2289%                              |
| 423840 | Industrial Supplies Merchant Wholesalers   | 0.0424%                    | 99.2712%                              |
| 423320 | Brick, Stone, and Related Construction Material Merchant Wholesalers                         | 0.0421%                    | 99.3133%                              |
| 541614 | Process, Physical Distribution, and Logistics Consulting Services                            | 0.0417%                    | 99.3550%                              |
| 562119 | Other Waste Collection   | 0.0364%                    | 99.3915%                              |
| 423830 | Industrial Machinery and Equipment Merchant Wholesalers                                      | 0.0339%                    | 99.4253%                              |
| 541519 | Other Computer Related Services  | 0.0338%                    | 99.4591%                              |
| 333922 | Conveyor and Conveying Equipment Manufacturing   | 0.0326%                    | 99.4917%                              |

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| NAICS  | NAICS Code Description  | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|---|----------------------------|---------------------------------------|
| 424720 | Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)                  | 0.0304%                    | 99.5221%                              |
| 335129 | Other Lighting Equipment Manufacturing  | 0.0276%                    | 99.5497%                              |
| 488190 | Other Support Activities for Air Transportation   | 0.0271%                    | 99.5768%                              |
| 811310 | Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance | 0.0261%                    | 99.6029%                              |
| 337212 | Custom Architectural Woodwork and Millwork Manufacturing  | 0.0261%                    | 99.6290%                              |
| 541820 | Public Relations Agencies   | 0.0244%                    | 99.6534%                              |
| 541370 | Surveying and Mapping (except Geophysical) Services   | 0.0234%                    | 99.6767%                              |
| 423210 | Furniture Merchant Wholesalers  | 0.0211%                    | 99.6978%                              |
| 332322 | Sheet Metal Work Manufacturing  | 0.0208%                    | 99.7187%                              |
| 424690 | Other Chemical and Allied Products Merchant Wholesalers   | 0.0205%                    | 99.7392%                              |
| 518210 | Data Processing, Hosting, and Related Services  | 0.0196%                    | 99.7588%                              |
| 532412 | Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing                               | 0.0177%                    | 99.7765%                              |
| 562991 | Septic Tank and Related Services  | 0.0159%                    | 99.7924%                              |
| 115310 | Support Activities for Forestry   | 0.0154%                    | 99.8078%                              |
| 332812 | Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers              | 0.0147%                    | 99.8224%                              |
| 424120 | Stationery and Office Supplies Merchant Wholesalers   | 0.0142%                    | 99.8366%                              |
| 541350 | Building Inspection Services  | 0.0137%                    | 99.8502%                              |
| 333120 | Construction Machinery Manufacturing  | 0.0120%                    | 99.8622%                              |
| 541512 | Computer Systems Design Services  | 0.0090%                    | 99.8713%                              |
| 561311 | Employment Placement Agencies   | 0.0090%                    | 99.8803%                              |
| 532120 | Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing                                    | 0.0086%                    | 99.8889%                              |
| 423440 | Other Commercial Equipment Merchant Wholesalers   | 0.0084%                    | 99.8973%                              |
| 213111 | Drilling Oil and Gas Wells  | 0.0073%                    | 99.9046%                              |
| 541910 | Marketing Research and Public Opinion Polling   | 0.0061%                    | 99.9107%                              |

| NAICS  | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|--|----------------------------|---------------------------------------|
| 532490 | Other Commercial and Industrial Machinery and Equipment Rental and Leasing             | 0.0053%                    | 99.9160%                              |
| 237120 | Oil and Gas Pipeline and Related Structures Construction                               | 0.0052%                    | 99.9212%                              |
| 334220 | Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing  | 0.0051%                    | 99.9263%                              |
| 423390 | Other Construction Material Merchant Wholesalers                                       | 0.0050%                    | 99.9314%                              |
| 813110 | Religious Organizations  | 0.0047%                    | 99.9361%                              |
| 561110 | Office Administrative Services   | 0.0043%                    | 99.9404%                              |
| 454310 | Fuel Dealers   | 0.0040%                    | 99.9444%                              |
| 541511 | Custom Computer Programming Services   | 0.0039%                    | 99.9483%                              |
| 321992 | Prefabricated Wood Building Manufacturing  | 0.0037%                    | 99.9520%                              |
| 444110 | Home Centers   | 0.0035%                    | 99.9555%                              |
| 221122 | Electric Power Distribution  | 0.0035%                    | 99.9590%                              |
| 423810 | Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers | 0.0033%                    | 99.9623%                              |
| 237210 | Land Subdivision   | 0.0030%                    | 99.9654%                              |
| 212313 | Crushed and Broken Granite Mining and Quarrying  | 0.0028%                    | 99.9681%                              |
| 712110 | Museums  | 0.0026%                    | 99.9708%                              |
| 541720 | Research and Development in the Social Sciences and Humanities                         | 0.0026%                    | 99.9733%                              |
| 423420 | Office Equipment Merchant Wholesalers  | 0.0025%                    | 99.9758%                              |
| 561612 | Security Guards and Patrol Services  | 0.0020%                    | 99.9779%                              |
| 321911 | Wood Window and Door Manufacturing   | 0.0020%                    | 99.9799%                              |
| 327390 | Other Concrete Product Manufacturing   | 0.0019%                    | 99.9817%                              |
| 423490 | Other Professional Equipment and Supplies Merchant Wholesalers                         | 0.0018%                    | 99.9836%                              |
| 326199 | All Other Plastics Product Manufacturing   | 0.0016%                    | 99.9852%                              |
| 337127 | Institutional Furniture Manufacturing  | 0.0016%                    | 99.9867%                              |
| 562212 | Solid Waste Landfill   | 0.0015%                    | 99.9882%                              |
| 561439 | Other Business Service Centers (including Copy Shops)                                  | 0.0015%                    | 99.9897%                              |

| NAICS        | NAICS Code Description                                     | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|--|----------------------------|---------------------------------------|
| 423220       | Home Furnishing Merchant Wholesalers                       | 0.0014%                    | 99.9911%                              |
| 332321       | Metal Window and Door Manufacturing                        | 0.0013%                    | 99.9924%                              |
| 221210       | Natural Gas Distribution                                   | 0.0011%                    | 99.9935%                              |
| 327420       | Gypsum Product Manufacturing                               | 0.0011%                    | 99.9946%                              |
| 115112       | Soil Preparation, Planting, and Cultivating                | 0.0010%                    | 99.9956%                              |
| 327991       | Cut Stone and Stone Product Manufacturing                  | 0.0008%                    | 99.9964%                              |
| 561210       | Facilities Support Services                                | 0.0006%                    | 99.9971%                              |
| 512120       | Motion Picture and Video Distribution                      | 0.0006%                    | 99.9977%                              |
| 811122       | Automotive Glass Replacement Shops                         | 0.0005%                    | 99.9981%                              |
| 488510       | Freight Transportation Arrangement                         | 0.0004%                    | 99.9985%                              |
| 541430       | Graphic Design Services                                    | 0.0004%                    | 99.9989%                              |
| 517919       | All Other Telecommunications                               | 0.0002%                    | 99.9991%                              |
| 541410       | Interior Design Services                                   | 0.0002%                    | 99.9993%                              |
| 335931       | Current-Carrying Wiring Device Manufacturing               | 0.0002%                    | 99.9995%                              |
| 221320       | Sewage Treatment Facilities                                | 0.0002%                    | 99.9997%                              |
| 562920       | Materials Recovery Facilities                              | 0.0001%                    | 99.9998%                              |
| 561920       | Convention and Trade Show Organizers                       | 0.0001%                    | 99.9999%                              |
| 541990       | All Other Professional, Scientific, and Technical Services | 0.0001%                    | 100.0000%                             |
| <b>TOTAL</b> |  |                            | <b>100.0%</b>                         |

Source: CHA analysis of DFW data

**Table D-4: Industry Percentage Distribution of Contracts by Dollars Paid  
Non-Car Rental Concessions, All Contracts**

| NAICS  | NAICS Code Description      | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|-----------------------------|----------------------------|---------------------------------------|
| 722310 | Food Service Contractors    | 54.28852%                  | 54.28852%                             |
| 451212 | News Dealers and Newsstands | 9.92236%                   | 64.21088%                             |
| 523130 | Commodity Contracts Dealing | 7.54224%                   | 71.75311%                             |

| NAICS  | NAICS Code Description                                  | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------|---|----------------------------|---------------------------------------|
| 453220 | Gift, Novelty, and Souvenir Stores                      | 7.16010%                   | 78.91322%                             |
| 445310 | Beer, Wine, and Liquor Stores                           | 4.41254%                   | 83.32576%                             |
| 445120 | Convenience Stores                                      | 2.42284%                   | 85.74860%                             |
| 443142 | Electronics Stores                                      | 2.16086%                   | 87.90946%                             |
| 722213 | Snack and Nonalcoholic Beverage Bars                    | 1.35077%                   | 89.26023%                             |
| 722110 | Full-Service Restaurants                                | 1.14610%                   | 90.40633%                             |
| 445292 | Confectionery and Nut Stores                            | 1.13604%                   | 91.54237%                             |
| 448190 | Other Clothing Stores                                   | 0.96963%                   | 92.51200%                             |
| 541850 | Outdoor Advertising                                     | 0.85797%                   | 93.36996%                             |
| 812112 | Beauty Salons   | 0.78599%                   | 94.15595%                             |
| 722513 | Limited-Service Restaurants                             | 0.72026%                   | 94.87621%                             |
| 448310 | Jewelry Stores  | 0.60948%                   | 95.48569%                             |
| 446120 | Cosmetics, Beauty Supplies, and Perfume Stores          | 0.56304%                   | 96.04873%                             |
| 448110 | Men's Clothing Stores                                   | 0.53739%                   | 96.58612%                             |
| 722515 | Snack and Nonalcoholic Beverage Bars                    | 0.48680%                   | 97.07292%                             |
| 621493 | Freestanding Ambulatory Surgical and Emergency Centers  | 0.43127%                   | 97.50420%                             |
| 722211 | Limited-Service Restaurants                             | 0.34390%                   | 97.84810%                             |
| 448140 | Family Clothing Stores                                  | 0.28592%                   | 98.13402%                             |
| 311812 | Commercial Bakeries                                     | 0.26804%                   | 98.40206%                             |
| 451110 | Sporting Goods Stores                                   | 0.23037%                   | 98.63243%                             |
| 454210 | Vending Machine Operators                               | 0.16888%                   | 98.80131%                             |
| 424490 | Other Grocery and Related Products Merchant Wholesalers | 0.16128%                   | 98.96259%                             |
| 446130 | Optical Goods Stores                                    | 0.15085%                   | 99.11344%                             |
| 448320 | Luggage and Leather Goods Stores                        | 0.12227%                   | 99.23571%                             |
| 488190 | Other Support Activities for Air Transportation         | 0.10110%                   | 99.33682%                             |
| 722410 | Drinking Places (Alcoholic Beverages)                   | 0.09256%                   | 99.42937%                             |
| 445299 | All Other Specialty Food Stores                         | 0.09205%                   | 99.52142%                             |

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| NAICS        | NAICS Code Description   | Pct Total Contract Dollars | Cumulative Pct Total Contract Dollars |
|--------------|--|----------------------------|---------------------------------------|
| 423440       | Other Commercial Equipment Merchant Wholesalers                          | 0.09051%                   | 99.61193%                             |
| 921130       | Public Finance Activities  | 0.07829%                   | 99.69022%                             |
| 721110       | Hotels (except Casino Hotels) and Motels                                 | 0.06847%                   | 99.75869%                             |
| 812990       | All Other Personal Services  | 0.06338%                   | 99.82207%                             |
| 448120       | Women's Clothing Stores  | 0.05545%                   | 99.87752%                             |
| 522320       | Financial Transactions Processing, Reserve, and Clearinghouse Activities | 0.04824%                   | 99.92577%                             |
| 446191       | Food (Health) Supplement Stores  | 0.02653%                   | 99.95229%                             |
| 722511       | Full-Service Restaurants   | 0.02370%                   | 99.97599%                             |
| 812111       | Barber Shops   | 0.01488%                   | 99.99087%                             |
| 491110       | Postal Service   | 0.00469%                   | 99.99556%                             |
| 561439       | Other Business Service Centers (including Copy Shops)                    | 0.00441%                   | 99.99997%                             |
| 492110       | Couriers and Express Delivery Services                                   | 0.00003%                   | 100.00000%                            |
| <b>TOTAL</b> |  |                            | <b>100.0%</b>                         |

*Source: CHA analysis of DFW data*