

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

Joint Availability and Disparity

4

VOLUME

DALLAS/
FORT WORTH
INTERNATIONAL
AIRPORT BOARD

FINAL REPORT | AUGUST 2010

Submitted by: Mason Tillman Associates, Ltd.



ACKNOWLEDGMENT

In 2008, North Central Texas Council of Governments (NCTCOG) commissioned an Availability and Disparity Study (Study) on behalf of six agencies that formed a Consortium. The six Consortium Agencies that participated in the Study are the City of Arlington, the City of Fort Worth, Dallas / Fort Worth International Airport Board, Fort Worth Independent School District, Fort Worth Transportation Authority, and the North Texas Tollway Authority. Mason Tillman Associates, Ltd., of Oakland, California was selected by NCTCOG to perform the Study.

The purpose of the Availability and Disparity Study was to evaluate the procurement and contracting practices of each agency, particularly their use of minority, woman-owned, and disadvantaged businesses and how well each Consortium Agency's current program promotes equal opportunity for bidding, diversification of its vendor base, and equitable distribution of purchases. The Dallas / Fort Worth International Airport Board Availability and Disparity Study focused on five industries - construction, architecture and engineering, professional services, non-professional services, and goods. It reviewed the award of prime contracts during the study period of October 1, 2002 to September 30, 2007.

The Burrell Group, Adrian Information Systems, Consumer and Market Insights, Trovada Davis Agency, Ms. Sherry Crum Tupper, and Scott Emblidge, Esq. assisted Mason Tillman in the performance of the Study. The subcontractor team performed legal analysis, data collection activities, anecdotal interviews, design services, and outreach to the business community.

The Study could not have been conducted without the cooperation of the local chambers of commerce and business organizations, and the many Tarrant County and Dallas County business owners who demonstrated their commitment to the Study by participating in interviews and focus groups. In addition, the Dallas / Fort Worth International Airport Board staff played a critical role in assisting with the data collection by making available Dallas / Fort Worth International Airport Board personnel, contract records, and documents needed to perform the Study. The extraordinary effort of the Dallas / Fort Worth International Airport Board and the business community should be applauded.

Monte Mercer, Deputy Executive Director and Donna Steward, Procurement and Facilities Coordinator of NCTCOG provided overall leadership and guidance for the Consortium's Availability and Disparity Study. Don O'Bannon, Vice President, Business Diversity and

Development and Suzanne Cruz-Sewell, Assistant Vice-President, Business Diversity and Development of the Dallas/Fort Worth International Airport Board facilitated Mason Tillman's effort to secure the needed resources to complete the Dallas / Fort Worth International Airport Board Availability and Disparity Study.

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CONTRACTING AND PROCUREMENT ANALYSIS

I. INTRODUCTION

Mason Tillman was commissioned by the North Central Texas Council of Governments to conduct an Availability and Disparity Study for the City of Arlington, the City of Fort Worth, Dallas / Fort Worth International Airport Board, Fort Worth Independent School District, Fort Worth Transportation Authority, and the North Texas Tollway Authority. This chapter reviews the contracting and procurement policies of the Dallas/Fort Worth International Airport Board (DFW) in the areas of goods and services, construction, and professional services during the October 1, 2002 to September 30, 2007 study period.

A. Governing Laws and Regulations

DFW's procurement procedures conform to standards established by DFW Airport Board Policy and applicable State and federal law which include:

- State Law
 - i. *Local Government Code*, Title 8: Acquisition, Sale or Lease of Property: Chapter 252 - *Purchasing and Contracting Authority of Municipalities*; Chapter 271 - *Purchasing and Contracting Authority of Municipalities, Counties and other Local Governments*
 - ii. *Texas Government Code*, Title 7. Intergovernmental Relations: Chapter 791- *Inter-local Cooperation Contracts*; Title 10. General Government: 2253 - *Public Work Performance and Payment Bonds*; 2254 - *Professional and Consulting Services*
 - iii. Texas Transportation Code Chapter, *Texas Transportation Corporation Act* 431 Subtitle I, Transportation Corporations



- Federal Laws and Regulations
 - i. *Federal Transit Act* as amended, through June 1992, 49 USC Sec. 1601 *et seq.*
 - ii. United States Department of Transportation, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments, 49 CFR Part 18
 - iii. Federal Transit Administration Master and Full Funding Grant Agreements
 - iv. Federal Transit Administration Circular 4220.1D, Third Party Contracting Guidelines, April 15, 1996
 - v. Federal Transit Administration Circular 5220.1B, Project Management Guidelines, 1995
 - vi. United States Department of Transportation Disadvantaged Business Program, 49 CFR Part 23 and 26, amended March 1999

II. DEFINITIONS

Goods and services procured by DFW are classified within the following three industries:

Goods and Services in which goods are defined as supplies, materials, commodities, and equipment and services defined as the furnishing of skilled or unskilled labor, not including construction or professional services covered by the Professional Services Procurement Act.¹

Construction Services are defined as new construction, remodeling, renovation, maintenance, and repair. For purposes of this report this industry will be defined as Construction.

Professional Services as defined by the Professional Services Procurement Act, are those services within the scope of the practice as defined by State law. The Act defines professional services by license and registration. The relevant licenses and registrations are accounting, architecture, landscape architecture, land surveying, professional engineering, or real estate appraising. For purposes of this report, this industry will be separated into professional services and architecture and engineering services.

¹ Professional Services Procurement Act (September 1, 1993), Texas Government Code, Chapter 2254



III. OVERVIEW OF THE PROCUREMENT PROCESS

DFW has adopted procurement procedures with the intent to provide guidelines for procuring items necessary to support the Airport's operations. The procurement of goods and services, construction, and professional services are subject to different advertisement, solicitation, and approval requirements. The requirements are determined by the industry value of the purchase and the circumstance under which the purchase is made.

Informal solicitations, for purposes of this report, are purchases valued less than \$25,000 for construction and goods and services and \$40,000 for professional services.² Informal solicitations are not subject to advertising requirements.

Formal solicitations, for purposes of this report, are purchases valued more than \$25,000 for construction and goods and services and \$40,000 for professionals services.³ Formal solicitations must be advertised and procured through a competitive process. Solicitations for Professional Services are not required to be advertised.

Purchases exempt from DFW's procurement process are detailed in Local Government Code 252.022 and include cooperative purchases, inter-local agreements, state contract purchases, emergency, and sole source solicitations

Table 1.01 summarizes the solicitation requirements by industry, described in Section IV.



² The informal solicitation threshold was increased to \$50,000 effective November 1, 2007 which is outside of the study period.

³ The formal solicitation threshold was increased to \$50,000 effective November 1, 2007 which is outside of the study period.

Table 1.01 Dallas / Fort Worth International Airport Board Procurement Process

Procurement Category	Dollar Threshold	Advertising Requirement	Solicitation Process	Procurement Approval
Goods and Services	Valued less than \$3,000	None	<p>Only one bid or quote solicited.</p> <p>Procurement Cards are the only method for procuring goods and services valued less than \$3,000</p>	User Department
	Valued between \$3,000 and \$25,000	None	<p>A minimum of three bids or quotes must be solicited.</p> <p>At least two bid or quotes must be solicited from Historically Underutilized Businesses, if available.</p>	PMM or ADE Departments

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Procurement Category	Dollar Threshold	Advertising Requirement	Solicitation Process	Procurement Approval
Goods and Services	Valued more than \$25,000	<p>Advertisements must be published twice in one or more newspapers of general circulation in the county or counties in which the work is to be performed.</p> <p>The first publication must be on or before the 14th day prior to bid opening.</p>	Competitive Sealed Bid or Competitive Sealed Proposals	Procurement and Material Management (PMM) or Airport Development and Engineering (ADE) Departments or Board of Directors
Construction	Valued less than \$3,000	None	Only one bid or quote solicited	PMM or ADE Departments
Construction	Valued at \$3,000 through \$25,000	None	A minimum of three bids or quotes must be solicited. At least two bid or quotes must be solicited from Historically Underutilized Businesses, if available.	PMM or ADE Departments

Procurement Category	Dollar Threshold	Advertising Requirement	Solicitation Process	Procurement Approval
	Valued more than \$25,000	Advertisements must be published twice in one or more newspapers of general circulation in the county or counties in which the work is to be performed.	Competitive Sealed Bid or Competitive Sealed Proposal	PMM or ADE Departments or Board of Directors
Professional Services	Valued more than \$40,000	None	Competitive Sealed Proposals	PMM or ADE Departments or Board of Directors depending on value
Architecture and Engineering	Valued more than \$40,000	None	Request for Qualifications	PMM or ADE Departments or Board of Directors depending on value
Inter-Local Agreements	None	None	None	PMM or ADE Departments or Board of Directors depending on value

Procurement Category	Dollar Threshold	Advertising Requirement	Solicitation Process	Procurement Approval
Emergency / Public Calamity	None	None	None	PMM or ADE Departments with retroactive Board of Directors approval, depending on value
Sole Source	None	None	None	PMM or ADE Departments with retroactive Board of Directors approval, depending on value

IV. STANDARDS FOR PROCURING DALLAS / FORT WORTH INTERNATIONAL AIRPORT BOARD CONTRACTS

A. Informal Solicitations

Informal solicitations are designed to promote efficiency and economy in contracting as well as to avoid unnecessary burdens for DFW and its contractors. The informal solicitation method is also considered a standard to reduce administrative costs and improve opportunities for small and disadvantaged business enterprises to obtain a fair proportion of DFW contracts. There is no advertisement required for informal purchases.

1. Purchases of Goods and Services Valued Less than \$3,000

Purchases of goods and services valued less than \$3,000 may be procured by soliciting one bid or quote. DFW procurement cards may be used to purchase low-value supplies and services. Procurement and Material Management (PMM) or Airport Development and Engineering (ADE) Department personnel are authorized to approve these procurement card purchases.

2. Purchases of Goods and Services Valued at \$3,000 through \$25,000

Purchases of goods and services valued at \$3,000 through \$25,000⁴ require a minimum of three quotes be solicited. At least two quotes must be solicited from Historically Underutilized Businesses (HUBs), if they are available. If no HUBs are identified in the county where the work will be performed the requirement may be waived. PMM or ADE personnel are authorized to approve these purchases. However, the selection of a firm is based on a determination of the most responsible and responsive bidder.

3. Purchases of Construction Valued Less than \$3,000

Purchases of construction services valued less than \$3,000 require only one quote be solicited. PMM or ADE personnel are authorized to approve these solicitations.

4. Purchases of Construction Services Valued at \$3,000 through \$25,000

Purchases of construction services valued at \$3,000 through \$25,000 require a minimum of three quotes be solicited. At least two quotes must be solicited from M/WBEs and Historically Underutilized Businesses (HUBs), if they are available. If no HUBs are identified in the county where the work will be performed the requirement may be waived.

⁴ The informal solicitation threshold was increased to \$50,000 effective November 1, 2007 which is outside of the study period



PMM or ADE personnel are authorized to approve these purchases. However, the selection of a firm is based on a determination of the most responsible and responsive bidder.

B. Formal Solicitations

Contracts valued more than \$25,000⁵ for goods and services and construction services are considered formal purchases. All formal purchases are subject to advertising requirements and must receive Board of Directors approval prior to award.

1. Purchases of Goods and Services Valued more than \$25,000

Purchases of goods and services valued more than \$25,000 must be advertised in local newspapers. The advertisements must be published at least twice in one or more newspapers of general circulation in each county where the work is to be performed. The quotes are evaluated and approved by PMM and the Vice President of the user department. PMM, with the assistance of the User Department, will prepare an Official Board Action; the Board of Directors must then approve the solicitation. Recommendation for award of such solicitations is also based on a determination of the most responsible and responsive bidder.

2. Purchases of Construction Services Valued more than \$25,000

Purchases of goods and services valued more than \$25,000 must be advertised in local newspapers. The advertisements must be published at least twice in one or more newspapers of general circulation in each county where the work is to be performed. The quotes are evaluated by PMM or ADE, along with the Vice President of the user department. PMM or ADE, with the assistance of the User Department, will prepare an Official Board Action; the Board of Directors must then approve the solicitation. Recommendation for award of such solicitations is based on a determination of the most responsible and responsive bidder.

C. Professional Services and Architecture and Engineering Solicitations

1. Purchases of Professional Services

Purchases of professional services valued more than \$40,000⁶ are solicited through DFW's competitive sealed proposals process and are awarded on the basis of demonstrated competence and qualifications. An evaluation team reviews the proposals submitted and independently scores the Proposers based on predetermined weighted factors. PMM or

⁵ The formal solicitation threshold was increased to \$50,000 effective November 1, 2007 which is outside of the study period.

⁶ Ibid.



ADE, using the scores from the Evaluation Team, will prepare an Official Board Action; the Board of Directors must approve the solicitation, unless it falls under the \$40,000 threshold.

2. Purchases of Architecture and Engineering Services

Architectural and Engineering purchases over \$40,000 are solicited through a two-step process. During step one, a firm capable of performing the necessary services is selected based on a Request for Qualifications. Step two involves securing a Request for Proposals from the selected firm and entering into negotiations. If the negotiations fail, the process is repeated for the next most qualified respondent. The Board of Directors is authorized to approve these solicitations.

V. EXEMPTIONS FROM DFW BOARD'S PROCUREMENT PROCESS

Certain solicitations are exempt from DFW's competitive procurement process. All allowed exemptions are listed in Local Government Code 252.022. Reasonable efforts must be made to obtain quotes from at least three suppliers for the item or service which cannot be solicited by the adjustment of existing contracts. The solicitation and response must be in writing, if time permits. If not, a written record shall be maintained of the essential facts of the oral solicitation and response.

These exemptions include but are not limited to the following:

A. Cooperative Purchases

Cooperative purchases occur when two or more governmental entities coordinate some or all of each entity's purchasing efforts to reduce administrative costs, take advantage of quality discounts, share specifications, or create a heightened awareness of the legal requirements. Cooperative purchases occur through inter-local agreements. Cooperative purchases are compliant with State and federal competitive bid requirements.

B. Emergency Purchases

Emergency purchases are permitted when it becomes necessary to act at once to appropriate money to relieve the necessity of citizens of the municipality to preserve the property of municipality, protect the public health and safety of the citizens, or amend unforeseen damage to public property, machinery, or equipment. All emergency purchases, regardless of dollar threshold, are not subject to formal advertising or solicitation requirements.



C. Sole Source

Sole source purchases may be awarded for goods and services that can only be obtained from a single supplier or manufacturer. Sole source purchases include but are not limited to purchases of patents or copyrights; books or manuscripts; electric power, gas, water, or utility services; and captive replacement parts. Sole source solicitations are not required to be solicited competitively.

VI. DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

It is the policy of the DFW Board (Board) to ensure that Disadvantaged Business Enterprises (DBEs) as defined in 49 CFR Part 26, have an equal opportunity to receive and participate in Department of Transportation (DOT)-assisted contracts. To meet the objectives of Board's policy, systematic procedures have been developed to ensure that DBEs are afforded equitable opportunities to compete on all Board contracts, such as but not limited to timely dissemination of bid/contract information, contract workshops, trade fairs, and technical, financial, and managerial assistance.

Every DOT-assisted contract is monitored by the Board to ensure that DBE subcontractors are performing work as approved and payments are being made to DBEs consistent with previously approved work plans. Additionally, the Board establishes annual DBE goals in accordance with the two-step process specified in 49 CFR Part 26.45. Through this process the Board aims to meet the maximum feasible portion of its overall goal utilizing race-neutral means to facilitate DBE participation. In the event the Board projects that annual race-neutral goals will not be met, contract-specific goals are utilized to meet any portion of the overall goal that is not anticipated to be met. A detailed description of the Board's DBE program is discussed in *Chapter 8: Recommendations*.

VII. MINORITY/WOMEN BUSINESS ENTERPRISES

DFW's PMM Department in accordance with the Board of Director's Minority/Women Business Enterprise (M/WBE) Program, actively recruit M/WBE vendors and ensure that M/WBEs are aggressively solicited. The Board sets M/WBE participation goals for all contracts. Prime contractors are required to make a Good Faith Effort to reach M/WBE goals. Results of these efforts are reported to the Board on a monthly basis. A detailed description of the Board's M/WBE Program is discussed in *Chapter 8: Recommendations*.



VIII. NON-DISCRIMINATION POLICY

Under the direction of the Board's Liaison Officer for the DBE program, the Board ensures that non-discriminatory policies are implemented and compliance with all legal obligations are followed in the Board's financial assistance agreements with the DOT. It is the Board's policy to do the following:

- To ensure non-discrimination in the award and administration of DOT-assisted contracts
- To create a level playing field on which DBEs can compete fairly for DOT-assisted contracts
- To ensure the DBE Program is narrowly tailored in accordance with applicable law
- To ensure that only firms that meet 49 CFR Part 26 eligibility standards are permitted to participate as DBEs
- To help remove barriers to the participation of DBEs in DOT-assisted contracts
- To assist the development of firms that can compete successfully in the market place outside the DBE Program



2

PRIME CONTRACTOR UTILIZATION ANALYSIS

I. INTRODUCTION

The first step in a disparity study is the analysis of expenditures to document contracting history in the jurisdiction under review. The objective of the prime utilization analysis is to determine the level of minority and woman-owned business enterprise (M/WBE) utilization as prime contractors.

This chapter documents the Dallas/Fort Worth International Airport's (DFW) utilization of minority-owned prime contractors (by ethnic group) and women-owned prime contractors from October 1, 2002 to September 30, 2007. The analysis of DFW's expenditures during the study period were classified into five industries. The industries are construction, architecture and engineering, professional services, non-professional services, and goods. Construction included public work for new construction, remodeling, renovation, maintenance, demolition and repair of any public structure or building, and other public improvements. Architecture and engineering included construction management, landscape architecture, surveying, mapping services, and architecture and engineering. Professional services included services provided by attorneys, accountants, medical professionals, technical services, research planning, and consultants. Non-professional services included maintenance and other services which could be performed without a professional license, special education, or training. Goods included materials, supplies, and equipment.

The data in the Study is disaggregated into nine ethnic and gender groups. The nine groups are listed below in Table 2.01.



Table 2.01 Business Ethnic and Gender Groups

Ethnic and Gender Category	Definition
African American Businesses	Businesses owned by male and female African Americans
Asian American Businesses	Businesses owned by male and female Asian-Pacific and Subcontinent Asian Americans
Hispanic American Businesses	Businesses owned by male and female Hispanic Americans
Native American Businesses	Businesses owned by male and female Native Americans
Caucasian Female Business Enterprises	Businesses owned by Caucasian females
Minority Business Enterprises	Businesses owned by African American, Asian American, Hispanic American, and Native American males and females
Women Business Enterprises	Businesses owned by Caucasian females
Minority and Women Business Enterprises	Businesses owned by Minority males, Minority females, and Caucasian females
Caucasian Male Business Enterprises	Businesses owned by Caucasian males and businesses that did not declare their ethnicity or could not be identified as minority or female-owned

II. PRIME CONTRACT DATA SOURCES

The dataset analyzed for prime contractor utilization consists of payments and awards from contracts and purchase orders issued by DFW during the study period. For contracts and purchase orders, the records were grouped by the unique contract or PO number. In this study, all unique transactions are referred to as contracts.

The contract records were extracted from the two financial systems DFW used during the study period: B2Gnow and Oracle Financial System. Mason Tillman, in collaboration with DFW, verified and cleaned the data to remove duplicates, cross-referenced contracts and purchase orders, and identified and completed missing or incomplete data.



Each contract was classified into one of the five industries: construction, architecture and engineering, professional services, non-professional services, and goods. Contracts with non-profits, government agencies, and utilities, were marked for exclusion. The industry classifications were reviewed and approved by DFW.

When the industry classifications were approved, the ethnicity and gender were verified. The ethnicity and gender information for prime contractors was incomplete, and some records had to be reconstructed, a common problem with government records. Since ethnicity and gender information is central to the validity of the prime contractor utilization analysis, Mason Tillman conducted research to verify the ethnicity and gender for each contract. Prime contractor names were cross-referenced with certification lists, chambers of commerce and trade organization membership directories. Websites were reviewed for ethnicity and gender of the owner(s). Prime contractors whose ethnicity and gender could not be verified through published sources were surveyed.

Once the contract records were cleaned and the ethnicity and gender verified, the utilization analysis was performed.



III. PRIME CONTRACTOR UTILIZATION THRESHOLDS

Contracts within each of the five industries were analyzed at three dollar value categories. One category included all contracts regardless of dollar value. A second category included all contracts under \$500,000. This was the level where there was a demonstrated capacity within the pool of willing M/WBEs to perform DFW’s contracts. The third category included the informal contracts which did not require advertising. As seen in Table 2.02, for construction the threshold was \$25,000 and under, for architecture and engineering the threshold was \$40,000 and under, for professional services the threshold was \$40,000 and under; for non-professional services the threshold was \$25,000 and under, and for goods the threshold was \$25,000 and under.

Table 2.02 Informal Contract Thresholds for DFW

Industry	Informal Contract Threshold
Construction	\$25,000
Architecture and Engineering	\$40,000
Professional Services	\$40,000
Non-Professional Services	\$25,000
Goods	\$25,000



IV. PRIME CONTRACTOR UTILIZATION

A. All Prime Contractors

As depicted in Table 2.03 below, DFW issued 4,856 contracts and purchase orders during the October 1, 2002 to September 30, 2007 study period. These transactions are referred to as contracts in this study. The 4,856 contracts included 118 for construction, 41 for architecture and engineering, 174 for professional services, 735 for non-professional services, and 3,788 for goods.

The payments made by DFW during the study period totaled \$995,804,354 for all 4,856 contracts. These expenditures included \$392,436,277 for construction, \$69,427,262 for architecture and engineering, \$25,638,325 for professional services, \$434,413,844 for non-professional services, and \$73,888,646 for goods.

Table 2.03 Total Prime Contracts and Dollars Expended: All Industries, October 1, 2002 to September 30, 2007

Industry	Total Number of Contracts	Total Dollars Expended
Construction	118	\$392,436,277
Architecture and Engineering	41	\$69,427,262
Professional Services	174	\$25,638,325
Non-Professional Services	735	\$434,413,844
Goods	3,788	\$73,888,646
Total Expenditures	4,856	\$995,804,354



B. Highly Used Prime Contractors

As depicted in Table 2.04 below, the 4,856 DFW prime contracts were received by 1,137 vendors.

Table 2.04 Total Prime Contracts, Utilized Vendors, and Dollars Expended: All Industries, October 1, 2002 to September 30, 2007

Total Contracts	4,856
Total Utilized Vendors	1,137
Total Expenditures	\$995,804,354

21 of the 1,137 vendors received 60 percent of the 4,856 prime contracts. Three vendors representing 0.06 percent of all vendors utilized during the study period, received \$271,242,020 or 27 percent of the contract dollars. Table 2.05 below depicts the distribution of the total prime contracts by number of vendors.

Table 2.05 Distribution of All Contracts by Number of Vendors

Vendors	Total Dollars	Percent of Dollars	Number of Contracts	Percent of Contracts
3 Vendors Received	\$271,242,020	27%	6	0.12%
13 Vendors Received	\$497,206,524	50%	36	0.74%
21 Vendors Received	\$600,124,385	60%	67	1.38%
1,116 Vendors Received	\$395,679,969	40%	4,789	98.62%
1,137 Vendors Received	\$995,804,354	100%	4,856	100.00%

Table 2.06 below presents the ethnic and gender profile of the 21 most highly used prime contractors. The majority of the highly used prime contractors were Caucasian male businesses. The individual contracts received by the 21 businesses ranged from \$5,251 to \$129,635,169.27.



**Table 2.06 Top Twenty-one Highly Used Prime Contractors
by Ethnicity and Gender**

Ethnicity/Gender	Total Dollars	Percent of Dollars	Number of Contracts	Percent of Contracts
African Americans	\$24,025,000	4.00%	3	4.48%
Asian Americans	\$14,063,193	2.34%	1	1.49%
Hispanic Americans	\$26,616,544	4.44%	17	25.37%
Native Americans	\$0	0.00%	0	0.00%
Caucasian Females	\$12,718,004	2.12%	2	2.99%
Caucasian Males	\$522,701,644	87.10%	44	65.67%
Total	\$600,124,385	100.00%	67	100.00%



C. All Prime Contracts, by Industry

1. Construction Prime Contractor Utilization: All Contracts

Table 2.07 summarizes all prime contract dollars expended by DFW on construction contracts. Minority Business Enterprises received 21.32 percent of the construction prime contract dollars; Women Business Enterprises received 6.07 percent; and Caucasian Male Business Enterprises received 72.61 percent. These ethnic and gender groups are defined in Table 2.01 of this chapter.

African Americans received 13 or 11.02 percent of the construction contracts during the study period, representing \$42,635,056 or 10.86 percent of the contract dollars.

Asian Americans received none of the construction contracts during the study period.

Hispanic Americans received 27 or 22.88 percent of the construction contracts during the study period, representing \$40,475,598 or 10.31 percent of the contract dollars.

Native Americans received 3 or 2.54 percent of the construction contracts during the study period, representing \$567,597 or 0.14 percent of the contract dollars.

Minority Business Enterprises received 43 or 36.44 percent of the construction contracts during the study period, representing \$83,678,250 or 21.32 percent of the contract dollars.

Women Business Enterprises received 13 or 11.02 percent of the construction contracts during the study period, representing \$23,822,637 or 6.07 percent of the contract dollars.

Minority and Women Business Enterprises received 56 or 47.46 percent of the construction contracts during the study period, representing \$107,500,888 or 27.39 percent of the contract dollars.

Caucasian Male Business Enterprises received 62 or 52.54 percent of the construction contracts during the study period, representing \$284,935,389 or 72.61 percent of the contract dollars.



Table 2.07 Construction Prime Contractor Utilization: All Contracts, October 1, 2002 to September 30, 2007

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	13	11.02%	\$42,635,056	10.86%
Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	27	22.88%	\$40,475,598	10.31%
Native Americans	3	2.54%	\$567,597	0.14%
Caucasian Females	13	11.02%	\$23,822,637	6.07%
Caucasian Males	62	52.54%	\$284,935,389	72.61%
TOTAL	118	100.00%	\$392,436,277	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	2	1.69%	\$11,290	0.00%
African American Males	11	9.32%	\$42,623,766	10.86%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	27	22.88%	\$40,475,598	10.31%
Native American Females	2	1.69%	\$160,000	0.04%
Native American Males	1	0.85%	\$407,597	0.10%
Caucasian Females	13	11.02%	\$23,822,637	6.07%
Caucasian Males	62	52.54%	\$284,935,389	72.61%
TOTAL	118	100.00%	\$392,436,277	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	4	3.39%	\$171,290	0.04%
Minority Males	39	33.05%	\$83,506,960	21.28%
Caucasian Females	13	11.02%	\$23,822,637	6.07%
Caucasian Males	62	52.54%	\$284,935,389	72.61%
TOTAL	118	100.00%	\$392,436,277	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	43	36.44%	\$83,678,250	21.32%
Women Business Enterprises	13	11.02%	\$23,822,637	6.07%
Minority and Women Business Enterprises	56	47.46%	\$107,500,888	27.39%
Caucasian Male Business Enterprises	62	52.54%	\$284,935,389	72.61%
TOTAL	118	100.00%	\$392,436,277	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



2. Architecture and Engineering Prime Contractor Utilization: All Contracts

Table 2.08 summarizes all contract dollars expended by DFW on architecture and engineering prime contracts. Minority Business Enterprises received 18.45 percent of the architecture and engineering prime contract dollars; Women Business Enterprises received 8.25 percent; and Caucasian Male Business Enterprises received 73.31 percent.

African Americans received 2 or 4.88 percent of the architecture and engineering contracts during the study period, representing \$1,299,874 or 1.87 percent of the contract dollars.

Asian Americans received none of the architecture and engineering contracts during the study period.

Hispanic Americans received 2 or 4.88 percent of the architecture and engineering contracts during the study period, representing \$11,506,159 or 16.57 percent of the contract dollars.

Native Americans received none of the architecture and engineering contracts during the study period.

Minority Business Enterprises received 4 or 9.76 percent of the architecture and engineering contracts during the study period, representing \$12,806,033 or 18.45 percent of the contract dollars.

Women Business Enterprises received 7 or 17.07 percent of the architecture and engineering contracts during the study period, representing \$5,724,325 or 8.25 percent of the contract dollars.

Minority and Women Business Enterprises received 11 or 26.83 percent of the architecture and engineering contracts during the study period, representing \$18,530,358 or 26.69 percent of the contract dollars.

Caucasian Male Business Enterprises received 30 or 73.17 percent of the architecture and engineering contracts during the study period, representing \$50,896,904 or 73.31 percent of the contract dollars.



**Table 2.08 Architecture and Engineering Prime Contractor
Utilization: All Contracts, October 1, 2002 to September 30,
2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	2	4.88%	\$1,299,874	1.87%
Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	2	4.88%	\$11,506,159	16.57%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	7	17.07%	\$5,724,325	8.25%
Caucasian Males	30	73.17%	\$50,896,904	73.31%
TOTAL	41	100.00%	\$69,427,262	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	2	4.88%	\$1,299,874	1.87%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	1	2.44%	\$10,756,159	15.49%
Hispanic American Males	1	2.44%	\$750,000	1.08%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	7	17.07%	\$5,724,325	8.25%
Caucasian Males	30	73.17%	\$50,896,904	73.31%
TOTAL	41	100.00%	\$69,427,262	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	1	2.44%	\$10,756,159	15.49%
Minority Males	3	7.32%	\$2,049,874	2.95%
Caucasian Females	7	17.07%	\$5,724,325	8.25%
Caucasian Males	30	73.17%	\$50,896,904	73.31%
TOTAL	41	100.00%	\$69,427,262	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	4	9.76%	\$12,806,033	18.45%
Women Business Enterprises	7	17.07%	\$5,724,325	8.25%
Minority and Women Business Enterprises	11	26.83%	\$18,530,358	26.69%
Caucasian Male Business Enterprises	30	73.17%	\$50,896,904	73.31%
TOTAL	41	100.00%	\$69,427,262	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



3. Professional Services Prime Contractor Utilization: All Contracts

Table 2.09 summarizes all contract dollars expended by DFW on professional services prime contracts. Minority Business Enterprises received 10.8 percent of the professional services prime contract dollars; Women Business Enterprises received 4.27 percent; and Caucasian Male Business Enterprises received 84.93 percent.

African Americans received 5 or 2.87 percent of the professional services contracts during the study period, representing \$884,800 or 3.45 percent of the contract dollars.

Asian Americans received 1 or 0.57 percent of the professional services contracts during the study period, representing \$500,000 or 1.95 percent of the contract dollars.

Hispanic Americans received 6 or 3.45 percent of the professional services contracts during the study period, representing \$1,105,444 or 4.31 percent of the contract dollars.

Native Americans received 3 or 1.72 percent of the professional services contracts during the study period, representing \$278,600 or 1.09 percent of the contract dollars.

Minority Business Enterprises received 15 or 8.62 percent of the professional services contracts during the study period, representing \$2,768,844 or 10.8 percent of the contract dollars.

Women Business Enterprises received 9 or 5.17 percent of the professional services contracts during the study period, representing \$1,094,531 or 4.27 percent of the contract dollars.

Minority and Women Business Enterprises received 24 or 13.79 percent of the professional services contracts during the study period, representing \$3,863,375 or 15.07 percent of the contract dollars.

Caucasian Male Business Enterprises received 150 or 86.21 percent of the professional services contracts during the study period, representing \$21,774,950 or 84.93 percent of the contract dollars.



**Table 2.09 Professional Services Prime Contractor
Utilization: All Contracts, October 1, 2002 to September 30,
2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	5	2.87%	\$884,800	3.45%
Asian Americans	1	0.57%	\$500,000	1.95%
Hispanic Americans	6	3.45%	\$1,105,444	4.31%
Native Americans	3	1.72%	\$278,600	1.09%
Caucasian Females	9	5.17%	\$1,094,531	4.27%
Caucasian Males	150	86.21%	\$21,774,950	84.93%
TOTAL	174	100.00%	\$25,638,325	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	2	1.15%	\$598,700	2.34%
African American Males	3	1.72%	\$286,100	1.12%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	1	0.57%	\$500,000	1.95%
Hispanic American Females	1	0.57%	\$335,000	1.31%
Hispanic American Males	5	2.87%	\$770,444	3.01%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	3	1.72%	\$278,600	1.09%
Caucasian Females	9	5.17%	\$1,094,531	4.27%
Caucasian Males	150	86.21%	\$21,774,950	84.93%
TOTAL	174	100.00%	\$25,638,325	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	3	1.72%	\$933,700	3.64%
Minority Males	12	6.90%	\$1,835,144	7.16%
Caucasian Females	9	5.17%	\$1,094,531	4.27%
Caucasian Males	150	86.21%	\$21,774,950	84.93%
TOTAL	174	100.00%	\$25,638,325	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	15	8.62%	\$2,768,844	10.80%
Women Business Enterprises	9	5.17%	\$1,094,531	4.27%
Minority and Women Business Enterprises	24	13.79%	\$3,863,375	15.07%
Caucasian Male Business Enterprises	150	86.21%	\$21,774,950	84.93%
TOTAL	174	100.00%	\$25,638,325	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



4. Non-Professional Services Prime Contractor Utilization: All Contracts

Table 2.10 summarizes all contract dollars expended by DFW on non-professional services prime contracts. Minority Business Enterprises received 13.02 percent of the non-professional services prime contract dollars; Women Business Enterprises received 2.65 percent; and Caucasian Male Business Enterprises received 84.33 percent.

African Americans received 38 or 5.17 percent of the non-professional services contracts during the study period, representing \$9,813,573 or 2.26 percent of the contract dollars.

Asian Americans received 22 or 2.99 percent of the non-professional services contracts during the study period, representing \$32,399,325 or 7.46 percent of the contract dollars.

Hispanic Americans received 24 or 3.27 percent of the non-professional services contracts during the study period, representing \$13,752,096 or 3.17 percent of the contract dollars.

Native Americans received 3 or 0.41 percent of the non-professional services contracts during the study period, representing \$609,800 or 0.14 percent of the contract dollars.

Minority Business Enterprises received 87 or 11.84 percent of the non-professional services contracts during the study period, representing \$56,574,793 or 13.02 percent of the contract dollars.

Women Business Enterprises received 68 or 9.25 percent of the non-professional services contracts during the study period, representing \$11,497,394 or 2.65 percent of the contract dollars.

Minority and Women Business Enterprises received 155 or 21.09 percent of the non-professional services contracts during the study period, representing \$68,072,187 or 15.67 percent of the contract dollars.

Caucasian Male Business Enterprises received 580 or 78.91 percent of the non-professional services contracts during the study period, representing \$366,341,657 or 84.33 percent of the contract dollars.



**Table 2.10 Non-Professional Services Prime Contractor
Utilization: All Contracts, October 1, 2002 to September 30,
2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	38	5.17%	\$9,813,573	2.26%
Asian Americans	22	2.99%	\$32,399,325	7.46%
Hispanic Americans	24	3.27%	\$13,752,096	3.17%
Native Americans	3	0.41%	\$609,800	0.14%
Caucasian Females	68	9.25%	\$11,497,394	2.65%
Caucasian Males	580	78.91%	\$366,341,657	84.33%
TOTAL	735	100.00%	\$434,413,844	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	16	2.18%	\$7,463,892	1.72%
African American Males	22	2.99%	\$2,349,681	0.54%
Asian American Females	5	0.68%	\$1,297,784	0.30%
Asian American Males	17	2.31%	\$31,101,541	7.16%
Hispanic American Females	3	0.41%	\$7,875,661	1.81%
Hispanic American Males	21	2.86%	\$5,876,435	1.35%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	3	0.41%	\$609,800	0.14%
Caucasian Females	68	9.25%	\$11,497,394	2.65%
Caucasian Males	580	78.91%	\$366,341,657	84.33%
TOTAL	735	100.00%	\$434,413,844	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	24	3.27%	\$16,637,336	3.83%
Minority Males	63	8.57%	\$39,937,457	9.19%
Caucasian Females	68	9.25%	\$11,497,394	2.65%
Caucasian Males	580	78.91%	\$366,341,657	84.33%
TOTAL	735	100.00%	\$434,413,844	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	87	11.84%	\$56,574,793	13.02%
Women Business Enterprises	68	9.25%	\$11,497,394	2.65%
Minority and Women Business Enterprises	155	21.09%	\$68,072,187	15.67%
Caucasian Male Business Enterprises	580	78.91%	\$366,341,657	84.33%
TOTAL	735	100.00%	\$434,413,844	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



5. Goods Prime Contractor Utilization: All Contracts

Table 2.11 summarizes all contract dollars expended by DFW on goods prime contracts. Minority Business Enterprises received 5.39 percent of the goods prime contract dollars; Women Business Enterprises received 9.62 percent; and Caucasian Male Business Enterprises received 84.98 percent.

African Americans received 213 or 5.62 percent of the goods contracts during the study period, representing \$1,066,726 or 1.44 percent of the contract dollars.

Asian Americans received 105 or 2.77 percent of the goods contracts during the study period, representing \$963,724 or 1.3 percent of the contract dollars.

Hispanic Americans received 247 or 6.52 percent of the goods contracts during the study period, representing \$1,374,965 or 1.86 percent of the contract dollars.

Native Americans received 185 or 4.88 percent of the goods contracts during the study period, representing \$580,091 or 0.79 percent of the contract dollars.

Minority Business Enterprises received 750 or 19.8 percent of the goods contracts during the study period, representing \$3,985,506 or 5.39 percent of the contract dollars.

Women Business Enterprises received 498 or 13.15 percent of the goods contracts during the study period, representing \$7,111,075 or 9.62 percent of the contract dollars.

Minority and Women Business Enterprises received 1,248 or 32.95 percent of the goods contracts during the study period, representing \$11,096,581 or 15.02 percent of the contract dollars.

Caucasian Male Business Enterprises received 2,540 or 67.05 percent of the goods contracts during the study period, representing \$62,792,065 or 84.98 percent of the contract dollars.



**Table 2.11 Goods Prime Contractor Utilization: All
Contracts, October 1, 2002 to September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	213	5.62%	\$1,066,726	1.44%
Asian Americans	105	2.77%	\$963,724	1.30%
Hispanic Americans	247	6.52%	\$1,374,965	1.86%
Native Americans	185	4.88%	\$580,091	0.79%
Caucasian Females	498	13.15%	\$7,111,075	9.62%
Caucasian Males	2,540	67.05%	\$62,792,065	84.98%
TOTAL	3,788	100.00%	\$73,888,646	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	129	3.41%	\$389,236	0.53%
African American Males	84	2.22%	\$677,490	0.92%
Asian American Females	48	1.27%	\$596,189	0.81%
Asian American Males	57	1.50%	\$367,535	0.50%
Hispanic American Females	82	2.16%	\$638,113	0.86%
Hispanic American Males	165	4.36%	\$736,851	1.00%
Native American Females	23	0.61%	\$307,533	0.42%
Native American Males	162	4.28%	\$272,558	0.37%
Caucasian Females	498	13.15%	\$7,111,075	9.62%
Caucasian Males	2,540	67.05%	\$62,792,065	84.98%
TOTAL	3,788	100.00%	\$73,888,646	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	282	7.44%	\$1,931,071	2.61%
Minority Males	468	12.35%	\$2,054,435	2.78%
Caucasian Females	498	13.15%	\$7,111,075	9.62%
Caucasian Males	2,540	67.05%	\$62,792,065	84.98%
TOTAL	3,788	100.00%	\$73,888,646	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	750	19.80%	\$3,985,506	5.39%
Women Business Enterprises	498	13.15%	\$7,111,075	9.62%
Minority and Women Business Enterprises	1,248	32.95%	\$11,096,581	15.02%
Caucasian Male Business Enterprises	2,540	67.05%	\$62,792,065	84.98%
TOTAL	3,788	100.00%	\$73,888,646	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



D. Prime Contracts under \$500,000, by Industry

1. Construction Prime Contractor Utilization: Contracts under \$500,000

Table 2.12 summarizes all contract dollars expended by DFW on construction prime contracts under \$500,000. Minority Business Enterprises received 47.6 percent of the prime contract dollars; Women Business Enterprises received 14.91 percent; and Caucasian Male Business Enterprises received 37.49 percent.

African Americans received 5 or 9.43 percent of the construction contracts under \$500,000 during the study period, representing \$681,312 or 8.29 percent of the contract dollars.

Asian Americans received none of the construction contracts under \$500,000 during the study period.

Hispanic Americans received 14 or 26.42 percent of the construction contracts under \$500,000 during the study period, representing \$2,661,535 or 32.4 percent of the contract dollars.

Native Americans received 3 or 5.66 percent of the construction contracts under \$500,000 during the study period, representing \$567,597 or 6.91 percent of the contract dollars.

Minority Business Enterprises received 22 or 41.51 percent of the construction contracts under \$500,000 during the study period, representing \$3,910,443 or 47.6 percent of the contract dollars.

Women Business Enterprises received 5 or 9.43 percent of the construction contracts under \$500,000 during the study period, representing \$1,224,960 or 14.91 percent of the contract dollars.

Minority and Women Business Enterprises received 27 or 50.94 percent of the construction contracts under \$500,000 during the study period, representing \$5,135,403 or 62.51 percent of the contract dollars.

Caucasian Male Business Enterprises received 26 or 49.06 percent of the construction contracts under \$500,000 during the study period, representing \$3,079,392 or 37.49 percent of the contract dollars.



**Table 2.12 Construction Prime Contractor Utilization:
Contracts under \$500,000, October 1, 2002 to September 30,
2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	5	9.43%	\$681,312	8.29%
Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	14	26.42%	\$2,661,535	32.40%
Native Americans	3	5.66%	\$567,597	6.91%
Caucasian Females	5	9.43%	\$1,224,960	14.91%
Caucasian Males	26	49.06%	\$3,079,392	37.49%
TOTAL	53	100.00%	\$8,214,795	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	2	3.77%	\$11,290	0.14%
African American Males	3	5.66%	\$670,022	8.16%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	14	26.42%	\$2,661,535	32.40%
Native American Females	2	3.77%	\$160,000	1.95%
Native American Males	1	1.89%	\$407,597	4.96%
Caucasian Females	5	9.43%	\$1,224,960	14.91%
Caucasian Males	26	49.06%	\$3,079,392	37.49%
TOTAL	53	100.00%	\$8,214,795	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	4	7.55%	\$171,290	2.09%
Minority Males	18	33.96%	\$3,739,153	45.52%
Caucasian Females	5	9.43%	\$1,224,960	14.91%
Caucasian Males	26	49.06%	\$3,079,392	37.49%
TOTAL	53	100.00%	\$8,214,795	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	22	41.51%	\$3,910,443	47.60%
Women Business Enterprises	5	9.43%	\$1,224,960	14.91%
Minority and Women Business Enterprises	27	50.94%	\$5,135,403	62.51%
Caucasian Male Business Enterprises	26	49.06%	\$3,079,392	37.49%
TOTAL	53	100.00%	\$8,214,795	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



2. Architecture and Engineering Prime Contractor Utilization: Contracts under \$500,000

Table 2.13 summarizes all contract dollars expended by DFW on architecture and engineering prime contracts under \$500,000. Minority Business Enterprises received 2.6 percent of the architecture and engineering prime contract dollars; Women Business Enterprises received 7.6 percent; and Caucasian Male Business Enterprises received 89.8 percent.

African Americans received 1 or 3.7 percent of the architecture and engineering contracts under \$500,000 during the study period, representing \$76,759 or 2.6 percent of the contract dollars.

Asian Americans received none of the architecture and engineering contracts under \$500,000 during the study period.

Hispanic Americans received none of the architecture and engineering contracts under \$500,000 during the study period.

Native Americans received none of the architecture and engineering contracts under \$500,000 during the study period.

Minority Business Enterprises received 1 or 3.7 percent of the architecture and engineering contracts under \$500,000 during the study period, representing \$76,759 or 2.6 percent of the contract dollars.

Women Business Enterprises received 4 or 14.81 percent of the architecture and engineering contracts under \$500,000 during the study period, representing \$224,325 or 7.6 percent of the contract dollars.

Minority and Women Business Enterprises received 5 or 18.52 percent of the architecture and engineering contracts under \$500,000 during the study period, representing \$301,084 or 10.2 percent of the contract dollars.

Caucasian Male Business Enterprises received 22 or 81.48 percent of the architecture and engineering contracts under \$500,000 during the study period, representing \$2,650,660 or 89.8 percent of the contract dollars.



**Table 2.13 Architecture and Engineering Prime Contractor
Utilization: Contracts under \$500,000, October 1, 2002 to
September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	1	3.70%	\$76,759	2.60%
Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	0	0.00%	\$0	0.00%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	4	14.81%	\$224,325	7.60%
Caucasian Males	22	81.48%	\$2,650,660	89.80%
TOTAL	27	100.00%	\$2,951,744	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	1	3.70%	\$76,759	2.60%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	0	0.00%	\$0	0.00%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	4	14.81%	\$224,325	7.60%
Caucasian Males	22	81.48%	\$2,650,660	89.80%
TOTAL	27	100.00%	\$2,951,744	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	0	0.00%	\$0	0.00%
Minority Males	1	3.70%	\$76,759	2.60%
Caucasian Females	4	14.81%	\$224,325	7.60%
Caucasian Males	22	81.48%	\$2,650,660	89.80%
TOTAL	27	100.00%	\$2,951,744	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	1	3.70%	\$76,759	2.60%
Women Business Enterprises	4	14.81%	\$224,325	7.60%
Minority and Women Business Enterprises	5	18.52%	\$301,084	10.20%
Caucasian Male Business Enterprises	22	81.48%	\$2,650,660	89.80%
TOTAL	27	100.00%	\$2,951,744	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



3. Professional Services Prime Contractor Utilization: Contracts under \$500,000

Table 2.14 summarizes all contract dollars expended by DFW on professional services prime contracts under \$500,000. Minority Business Enterprises received 19.05 percent of the professional services prime contract dollars; Women Business Enterprises received 1.04 percent; and Caucasian Male Business Enterprises received 79.91 percent.

African Americans received 4 or 2.47 percent of the professional services contracts under \$500,000 during the study period, representing \$351,800 or 3.86 percent of the contract dollars.

Asian Americans received none of the professional services contracts under \$500,000 during the study period.

Hispanic Americans received 6 or 3.7 percent of the professional services contracts under \$500,000 during the study period, representing \$1,105,444 or 12.13 percent of the contract dollars.

Native Americans received 3 or 1.85 percent of the professional services contracts under \$500,000 during the study period, representing \$278,600 or 3.06 percent of the contract dollars.

Minority Business Enterprises received 13 or 8.02 percent of the professional services contracts under \$500,000 during the study period, representing \$1,735,844 or 19.05 percent of the contract dollars.

Women Business Enterprises received 8 or 4.94 percent of the professional services contracts under \$500,000 during the study period, representing \$94,531 or 1.04 percent of the contract dollars.

Minority and Women Business Enterprises received 21 or 12.96 percent of the professional services contracts under \$500,000 during the study period, representing \$1,830,375 or 20.09 percent of the contract dollars.

Caucasian Male Business Enterprises received 141 or 87.04 percent of the professional services contracts under \$500,000 during the study period, representing \$7,281,926 or 79.91 percent of the contract dollars.



**Table 2.14 Professional Services Prime Contractor
Utilization: Contracts under \$500,000, October 1, 2002 to
September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	4	2.47%	\$351,800	3.86%
Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	6	3.70%	\$1,105,444	12.13%
Native Americans	3	1.85%	\$278,600	3.06%
Caucasian Females	8	4.94%	\$94,531	1.04%
Caucasian Males	141	87.04%	\$7,281,926	79.91%
TOTAL	162	100.00%	\$9,112,301	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	1	0.62%	\$65,700	0.72%
African American Males	3	1.85%	\$286,100	3.14%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	1	0.62%	\$335,000	3.68%
Hispanic American Males	5	3.09%	\$770,444	8.45%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	3	1.85%	\$278,600	3.06%
Caucasian Females	8	4.94%	\$94,531	1.04%
Caucasian Males	141	87.04%	\$7,281,926	79.91%
TOTAL	162	100.00%	\$9,112,301	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	2	1.23%	\$400,700	4.40%
Minority Males	11	6.79%	\$1,335,144	14.65%
Caucasian Females	8	4.94%	\$94,531	1.04%
Caucasian Males	141	87.04%	\$7,281,926	79.91%
TOTAL	162	100.00%	\$9,112,301	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	13	8.02%	\$1,735,844	19.05%
Women Business Enterprises	8	4.94%	\$94,531	1.04%
Minority and Women Business Enterprises	21	12.96%	\$1,830,375	20.09%
Caucasian Male Business Enterprises	141	87.04%	\$7,281,926	79.91%
TOTAL	162	100.00%	\$9,112,301	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



4. Non-Professional Services Prime Contractor Utilization: Contracts under \$500,000

Table 2.15 summarizes all contract dollars expended by DFW on non-professional services prime contracts under \$500,000. Minority Business Enterprises received 19.05 percent of the non-professional services prime contract dollars; Women Business Enterprises received 12.95 percent; and Caucasian Male Business Enterprises received 68 percent.

African Americans received 36 or 5.5 percent of the non-professional services contracts under \$500,000 during the study period, representing \$2,413,573 or 8.32 percent of the contract dollars.

Asian Americans received 9 or 1.37 percent of the non-professional services contracts under \$500,000 during the study period, representing \$1,746,986 or 6.02 percent of the contract dollars.

Hispanic Americans received 16 or 2.44 percent of the non-professional services contracts under \$500,000 during the study period, representing \$758,742 or 2.61 percent of the contract dollars.

Native Americans received 3 or 0.46 percent of the non-professional services contracts under \$500,000 during the study period, representing \$609,800 or 2.1 percent of the contract dollars.

Minority Business Enterprises received 64 or 9.77 percent of the non-professional services contracts under \$500,000 during the study period, representing \$5,529,100 or 19.05 percent of the contract dollars.

Women Business Enterprises received 63 or 9.62 percent of the non-professional services contracts under \$500,000 during the study period, representing \$3,758,645 or 12.95 percent of the contract dollars.

Minority and Women Business Enterprises received 127 or 19.39 percent of the non-professional services contracts under \$500,000 during the study period, representing \$9,287,745 or 32 percent of the contract dollars.

Caucasian Male Business Enterprises received 528 or 80.61 percent of the non-professional services contracts under \$500,000 during the study period, representing \$19,733,101 or 68 percent of the contract dollars.



**Table 2.15 Non-Professional Services Prime Contractor
Utilization: Contracts under \$500,000, October 1, 2002 to
September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	36	5.50%	\$2,413,573	8.32%
Asian Americans	9	1.37%	\$1,746,986	6.02%
Hispanic Americans	16	2.44%	\$758,742	2.61%
Native Americans	3	0.46%	\$609,800	2.10%
Caucasian Females	63	9.62%	\$3,758,645	12.95%
Caucasian Males	528	80.61%	\$19,733,101	68.00%
TOTAL	655	100.00%	\$29,020,846	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	15	2.29%	\$963,892	3.32%
African American Males	21	3.21%	\$1,449,681	5.00%
Asian American Females	4	0.61%	\$543,276	1.87%
Asian American Males	5	0.76%	\$1,203,710	4.15%
Hispanic American Females	1	0.15%	\$60,101	0.21%
Hispanic American Males	15	2.29%	\$698,641	2.41%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	3	0.46%	\$609,800	2.10%
Caucasian Females	63	9.62%	\$3,758,645	12.95%
Caucasian Males	528	80.61%	\$19,733,101	68.00%
TOTAL	655	100.00%	\$29,020,846	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	20	3.05%	\$1,567,269	5.40%
Minority Males	44	6.72%	\$3,961,831	13.65%
Caucasian Females	63	9.62%	\$3,758,645	12.95%
Caucasian Males	528	80.61%	\$19,733,101	68.00%
TOTAL	655	100.00%	\$29,020,846	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	64	9.77%	\$5,529,100	19.05%
Women Business Enterprises	63	9.62%	\$3,758,645	12.95%
Minority and Women Business Enterprises	127	19.39%	\$9,287,745	32.00%
Caucasian Male Business Enterprises	528	80.61%	\$19,733,101	68.00%
TOTAL	655	100.00%	\$29,020,846	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



5. Goods Prime Contractor Utilization: Contracts under \$500,000

Table 2.16 summarizes all contract dollars expended by DFW on goods prime contracts under \$500,000. Minority Business Enterprises received 15.72 percent of the goods prime contract dollars; Women Business Enterprises received 9.4 percent; and Caucasian Male Business Enterprises received 74.88 percent.

African Americans received 213 or 5.66 percent of the goods contracts under \$500,000 during the study period, representing \$1,066,726 or 4.84 percent of the contract dollars.

Asian Americans received 105 or 2.79 percent of the goods contracts under \$500,000 during the study period, representing \$963,724 or 4.37 percent of the contract dollars.

Hispanic Americans received 246 or 6.54 percent of the goods contracts under \$500,000 during the study period, representing \$856,020 or 3.88 percent of the contract dollars.

Native Americans received 185 or 4.92 percent of the goods contracts under \$500,000 during the study period, representing \$580,091 or 2.63 percent of the contract dollars.

Minority Business Enterprises received 749 or 19.91 percent of the goods contracts under \$500,000 during the study period, representing \$3,466,561 or 15.72 percent of the contract dollars.

Women Business Enterprises received 493 or 13.1 percent of the goods contracts under \$500,000 during the study period, representing \$2,072,822 or 9.4 percent of the contract dollars.

Minority and Women Business Enterprises received 1,242 or 33.01 percent of the goods contracts under \$500,000 during the study period, representing \$5,539,383 or 25.12 percent of the contract dollars.

Caucasian Male Business Enterprises received 2,520 or 66.99 percent of the goods contracts under \$500,000 during the study period, representing \$16,508,805 or 74.88 percent of the contract dollars.



Table 2.16 Goods Prime Contractor Utilization: Contracts under \$500,000, October 1, 2002 to September 30, 2007

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	213	5.66%	\$1,066,726	4.84%
Asian Americans	105	2.79%	\$963,724	4.37%
Hispanic Americans	246	6.54%	\$856,020	3.88%
Native Americans	185	4.92%	\$580,091	2.63%
Caucasian Females	493	13.10%	\$2,072,822	9.40%
Caucasian Males	2,520	66.99%	\$16,508,805	74.88%
TOTAL	3,762	100.00%	\$22,048,188	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	129	3.43%	\$389,236	1.77%
African American Males	84	2.23%	\$677,490	3.07%
Asian American Females	48	1.28%	\$596,189	2.70%
Asian American Males	57	1.52%	\$367,535	1.67%
Hispanic American Females	81	2.15%	\$119,169	0.54%
Hispanic American Males	165	4.39%	\$736,851	3.34%
Native American Females	23	0.61%	\$307,533	1.39%
Native American Males	162	4.31%	\$272,558	1.24%
Caucasian Females	493	13.10%	\$2,072,822	9.40%
Caucasian Males	2,520	66.99%	\$16,508,805	74.88%
TOTAL	3,762	100.00%	\$22,048,188	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	281	7.47%	\$1,412,127	6.40%
Minority Males	468	12.44%	\$2,054,435	9.32%
Caucasian Females	493	13.10%	\$2,072,822	9.40%
Caucasian Males	2,520	66.99%	\$16,508,805	74.88%
TOTAL	3,762	100.00%	\$22,048,188	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	749	19.91%	\$3,466,561	15.72%
Women Business Enterprises	493	13.10%	\$2,072,822	9.40%
Minority and Women Business Enterprises	1,242	33.01%	\$5,539,383	25.12%
Caucasian Male Business Enterprises	2,520	66.99%	\$16,508,805	74.88%
TOTAL	3,762	100.00%	\$22,048,188	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



E. Informal Contracts \$25,000 or \$40,000 and under, by Industry

1. Construction Prime Contractor Utilization: Contracts \$25,000 and under

Table 2.17 summarizes all contract dollars expended by DFW on construction prime contracts \$25,000 and under. Minority Business Enterprises received 52.11 percent of the construction prime contract dollars; Women Business Enterprises received none; and Caucasian Male Business Enterprises received 47.89 percent.

African Americans received 3 or 16.67 percent of the construction contracts \$25,000 and under during the study period, representing \$36,290 or 21.13 percent of the contract dollars.

Asian Americans received none of the construction contracts \$25,000 and under during the study period.

Hispanic Americans received 5 or 27.78 percent of the construction contracts \$25,000 and under during the study period, representing \$53,210 or 30.98 percent of the contract dollars.

Native Americans received none of the construction contracts \$25,000 and under during the study period.

Minority Business Enterprises received 8 or 44.44 percent of the construction contracts \$25,000 and under during the study period, representing \$89,500 or 52.11 percent of the contract dollars.

Women Business Enterprises received none of the construction contracts \$25,000 and under during the study period.

Minority and Women Business Enterprises received 8 or 44.44 percent of the construction contracts \$25,000 and under during the study period, representing \$89,500 or 52.11 percent of the contract dollars.

Caucasian Male Business Enterprises received 10 or 55.56 percent of the construction contracts \$25,000 and under during the study period, representing \$82,256 or 47.89 percent of the contract dollars.



**Table 2.17 Construction Prime Contractor Utilization:
Contracts \$25,000 and under, October 1, 2002 to September
30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	3	16.67%	\$36,290	21.13%
Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	5	27.78%	\$53,210	30.98%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	0	0.00%	\$0	0.00%
Caucasian Males	10	55.56%	\$82,256	47.89%
TOTAL	18	100.00%	\$171,756	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	2	11.11%	\$11,290	6.57%
African American Males	1	5.56%	\$25,000	14.56%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	5	27.78%	\$53,210	30.98%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	0	0.00%	\$0	0.00%
Caucasian Males	10	55.56%	\$82,256	47.89%
TOTAL	18	100.00%	\$171,756	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	2	11.11%	\$11,290	6.57%
Minority Males	6	33.33%	\$78,210	45.54%
Caucasian Females	0	0.00%	\$0	0.00%
Caucasian Males	10	55.56%	\$82,256	47.89%
TOTAL	18	100.00%	\$171,756	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	8	44.44%	\$89,500	52.11%
Women Business Enterprises	0	0.00%	\$0	0.00%
Minority and Women Business Enterprises	8	44.44%	\$89,500	52.11%
Caucasian Male Business Enterprises	10	55.56%	\$82,256	47.89%
TOTAL	18	100.00%	\$171,756	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



2. Architecture and Engineering Prime Contractor Utilization: Contracts \$40,000 and under

Table 2.18 summarizes all contract dollars expended by DFW on architecture and engineering prime contracts \$40,000 and under. Minority Business Enterprises received none of the architecture and engineering prime contract dollars; Women Business Enterprises received 31.51 percent; and Caucasian Male Business Enterprises received 68.49 percent.

African Americans received none of the architecture and engineering contracts \$40,000 and under during the study period.

Asian Americans received none of the architecture and engineering contracts \$40,000 and under during the study period.

Hispanic Americans received none of the architecture and engineering contracts \$40,000 and under during the study period.

Native Americans received none of the architecture and engineering contracts \$40,000 and under during the study period.

Minority Business Enterprises received none of the architecture and engineering contracts \$40,000 and under during the study period.

Women Business Enterprises received 3 or 18.75 percent of the architecture and engineering contracts \$84,325 and under during the study period, representing \$84,325 or 31.51 percent of the contract dollars.

Minority and Women Business Enterprises received 3 or 18.75 percent of the architecture and engineering contracts \$54,302 and under during the study period, representing \$84,325 or 31.51 percent of the contract dollars.

Caucasian Male Business Enterprises received 13 or 81.25 percent of the architecture and engineering contracts \$40,000 and under during the study period, representing \$183,271 or 68.49 percent of the contract dollars.



**Table 2.18 Architecture and Engineering Prime Contractor
Utilization: Contracts \$40,000 and under, October 1, 2002 to
September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	0	0.00%	\$0	0.00%
Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	0	0.00%	\$0	0.00%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	3	18.75%	\$84,325	31.51%
Caucasian Males	13	81.25%	\$183,271	68.49%
TOTAL	16	100.00%	\$267,596	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	0	0.00%	\$0	0.00%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	0	0.00%	\$0	0.00%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	3	18.75%	\$84,325	31.51%
Caucasian Males	13	81.25%	\$183,271	68.49%
TOTAL	16	100.00%	\$267,596	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	0	0.00%	\$0	0.00%
Minority Males	0	0.00%	\$0	0.00%
Caucasian Females	3	18.75%	\$84,325	31.51%
Caucasian Males	13	81.25%	\$183,271	68.49%
TOTAL	16	100.00%	\$267,596	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	0	0.00%	\$0	0.00%
Women Business Enterprises	3	18.75%	\$84,325	31.51%
Minority and Women Business Enterprises	3	18.75%	\$84,325	31.51%
Caucasian Male Business Enterprises	13	81.25%	\$183,271	68.49%
TOTAL	16	100.00%	\$267,596	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



3. Professional Services Prime Contractor Utilization: Contracts \$40,000 and under

Table 2.19 summarizes all contract dollars expended by DFW on professional services prime contracts \$40,000 and under. Minority Business Enterprises received 4.73 percent of the professional services prime contract dollars; Women Business Enterprises received 2.85 percent; and Caucasian Male Business Enterprises received 92.42 percent.

African Americans received 1 or 0.86 percent of the professional services contracts \$40,000 and under during the study period, representing \$15,500 or 1.5 percent of the contract dollars.

Asian Americans received none of the professional services contracts \$40,000 and under during the study period.

Hispanic Americans received 2 or 1.72 percent of the professional services contracts \$40,000 and under during the study period, representing \$25,444 or 2.46 percent of the contract dollars.

Native Americans received 1 or 0.86 percent of the professional services contracts \$40,000 and under during the study period, representing \$8,000 or 0.77 percent of the contract dollars.

Minority Business Enterprises received 4 or 3.45 percent of the professional services contracts \$40,000 and under during the study period, representing \$48,944 or 4.73 percent of the contract dollars.

Women Business Enterprises received 7 or 6.03 percent of the professional services contracts \$40,000 and under during the study period, representing \$29,531 or 2.85 percent of the contract dollars.

Minority and Women Business Enterprises received 11 or 9.48 percent of the professional services contracts \$40,000 and under during the study period, representing \$78,475 or 7.58 percent of the contract dollars.

Caucasian Male Business Enterprises received 105 or 90.52 percent of the professional services contracts \$40,000 and under during the study period, representing \$956,429 or 92.42 percent of the contract dollars.



**Table 2.19 Professional Services Prime Contractor
Utilization: Contracts \$40,000 and under, October 1, 2002 to
September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	1	0.86%	\$15,500	1.50%
Asian Americans	0	0.00%	\$0	0.00%
Hispanic Americans	2	1.72%	\$25,444	2.46%
Native Americans	1	0.86%	\$8,000	0.77%
Caucasian Females	7	6.03%	\$29,531	2.85%
Caucasian Males	105	90.52%	\$956,429	92.42%
TOTAL	116	100.00%	\$1,034,904	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	0	0.00%	\$0	0.00%
African American Males	1	0.86%	\$15,500	1.50%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	0	0.00%	\$0	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	2	1.72%	\$25,444	2.46%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	1	0.86%	\$8,000	0.77%
Caucasian Females	7	6.03%	\$29,531	2.85%
Caucasian Males	105	90.52%	\$956,429	92.42%
TOTAL	116	100.00%	\$1,034,904	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	0	0.00%	\$0	0.00%
Minority Males	4	3.45%	\$48,944	4.73%
Caucasian Females	7	6.03%	\$29,531	2.85%
Caucasian Males	105	90.52%	\$956,429	92.42%
TOTAL	116	100.00%	\$1,034,904	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	4	3.45%	\$48,944	4.73%
Women Business Enterprises	7	6.03%	\$29,531	2.85%
Minority and Women Business Enterprises	11	9.48%	\$78,475	7.58%
Caucasian Male Business Enterprises	105	90.52%	\$956,429	92.42%
TOTAL	116	100.00%	\$1,034,904	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



4. Non-Professional Services Prime Contractor Utilization: Contracts \$25,000 and under

Table 2.20 summarizes all contract dollars expended by DFW on non-professional services prime contracts \$25,000 and under. Minority Business Enterprises received 6.52 percent of the non-professional services prime contract dollars; Women Business Enterprises received 10.73 percent; and Caucasian Male Business Enterprises received 82.75 percent.

African Americans received 11 or 2.49 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$119,494 or 3.73 percent of the contract dollars.

Asian Americans received 3 or 0.68 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$13,441 or 0.42 percent of the contract dollars.

Hispanic Americans received 11 or 2.49 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$75,765 or 2.37 percent of the contract dollars.

Native Americans received none of the non-professional services contracts \$25,000 and under during the study period.

Minority Business Enterprises received 25 or 5.66 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$208,700 or 6.52 percent of the contract dollars.

Women Business Enterprises received 35 or 7.92 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$343,552 or 10.73 percent of the contract dollars.

Minority and Women Business Enterprises received 60 or 13.57 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$552,252 or 17.25 percent of the contract dollars.

Caucasian Male Business Enterprises received 382 or 86.43 percent of the non-professional services contracts \$25,000 and under during the study period, representing \$2,649,937 or 82.75 percent of the contract dollars.



**Table 2.20 Non-Professional Services Prime Contractor
Utilization: Contracts \$25,000 and under, October 1, 2002 to
September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	11	2.49%	\$119,494	3.73%
Asian Americans	3	0.68%	\$13,441	0.42%
Hispanic Americans	11	2.49%	\$75,765	2.37%
Native Americans	0	0.00%	\$0	0.00%
Caucasian Females	35	7.92%	\$343,552	10.73%
Caucasian Males	382	86.43%	\$2,649,937	82.75%
TOTAL	442	100.00%	\$3,202,189	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	3	0.68%	\$39,870	1.25%
African American Males	8	1.81%	\$79,624	2.49%
Asian American Females	2	0.45%	\$13,329	0.42%
Asian American Males	1	0.23%	\$112	0.00%
Hispanic American Females	0	0.00%	\$0	0.00%
Hispanic American Males	11	2.49%	\$75,765	2.37%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	0	0.00%	\$0	0.00%
Caucasian Females	35	7.92%	\$343,552	10.73%
Caucasian Males	382	86.43%	\$2,649,937	82.75%
TOTAL	442	100.00%	\$3,202,189	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	5	1.13%	\$53,199	1.66%
Minority Males	20	4.52%	\$155,501	4.86%
Caucasian Females	35	7.92%	\$343,552	10.73%
Caucasian Males	382	86.43%	\$2,649,937	82.75%
TOTAL	442	100.00%	\$3,202,189	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	25	5.66%	\$208,700	6.52%
Women Business Enterprises	35	7.92%	\$343,552	10.73%
Minority and Women Business Enterprises	60	13.57%	\$552,252	17.25%
Caucasian Male Business Enterprises	382	86.43%	\$2,649,937	82.75%
TOTAL	442	100.00%	\$3,202,189	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



5. Goods Prime Contractor Utilization: Contracts \$25,000 and under

Table 2.21 summarizes all contract dollars expended by DFW on goods prime contracts \$25,000 and under. Minority Business Enterprises received 17.75 percent of the goods prime contract dollars; Women Business Enterprises received 12.37 percent; and Caucasian Male Business Enterprises received 69.89 percent.

African Americans received 208 or 5.67 percent of the goods contracts \$25,000 and under during the study period, representing \$398,849 or 5.36 percent of the contract dollars.

Asian Americans received 100 or 2.73 percent of the good contracts \$25,000 and under during the study period, representing \$241,945 or 3.25 percent of the contract dollars.

Hispanic Americans received 244 or 6.66 percent of the goods contracts \$25,000 and under during the study period, representing \$396,479 or 5.33 percent of the contract dollars.

Native Americans received 184 or 5.02 percent of the goods contracts \$25,000 and under during the study period, representing \$282,180 or 3.8 percent of the contract dollars.

Minority Business Enterprises received 736 or 20.08 percent of the goods contracts \$25,000 and under during the study period, representing \$1,319,453 or 17.75 percent of the contract dollars.

Women Business Enterprises received 483 or 13.18 percent of the goods contracts \$25,000 and under during the study period, representing \$919,740 or 12.37 percent of the contract dollars.

Minority and Women Business Enterprises received 1,219 or 33.25 percent of the goods contracts \$25,000 and under during the study period, representing \$2,239,194 or 30.11 percent of the contract dollars.

Caucasian Male Business Enterprises received 2,447 or 66.75 percent of the goods contracts \$25,000 and under during the study period, representing \$5,196,372 or 69.89 percent of the contract dollars.



**Table 2.21 Goods Prime Contract Utilization: Contracts
\$25,000 and under, October 1, 2002 to September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	208	5.67%	\$398,849	5.36%
Asian Americans	100	2.73%	\$241,945	3.25%
Hispanic Americans	244	6.66%	\$396,479	5.33%
Native Americans	184	5.02%	\$282,180	3.80%
Caucasian Females	483	13.18%	\$919,740	12.37%
Caucasian Males	2,447	66.75%	\$5,196,372	69.89%
TOTAL	3,666	100.00%	\$7,435,565	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	127	3.46%	\$196,419	2.64%
African American Males	81	2.21%	\$202,429	2.72%
Asian American Females	44	1.20%	\$125,096	1.68%
Asian American Males	56	1.53%	\$116,849	1.57%
Hispanic American Females	81	2.21%	\$119,169	1.60%
Hispanic American Males	163	4.45%	\$277,311	3.73%
Native American Females	22	0.60%	\$9,622	0.13%
Native American Males	162	4.42%	\$272,558	3.67%
Caucasian Females	483	13.18%	\$919,740	12.37%
Caucasian Males	2,447	66.75%	\$5,196,372	69.89%
TOTAL	3,666	100.00%	\$7,435,565	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	274	7.47%	\$450,306	6.06%
Minority Males	462	12.60%	\$869,147	11.69%
Caucasian Females	483	13.18%	\$919,740	12.37%
Caucasian Males	2,447	66.75%	\$5,196,372	69.89%
TOTAL	3,666	100.00%	\$7,435,565	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	736	20.08%	\$1,319,453	17.75%
Women Business Enterprises	483	13.18%	\$919,740	12.37%
Minority and Women Business Enterprises	1,219	33.25%	\$2,239,194	30.11%
Caucasian Male Business Enterprises	2,447	66.75%	\$5,196,372	69.89%
TOTAL	3,666	100.00%	\$7,435,565	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



V. SUMMARY

DFW's prime contractor utilization analysis examined the \$995,804,354 expended on 4,856 prime contracts issued between October 1, 2002 to September 30, 2007. The \$995,804,354 expended included \$392,436,277 for construction, \$69,427,262 for architecture and engineering, \$25,638,325 for professional services, \$434,413,844 for non-professional services, and \$73,888,646 for goods. A total of 4,856 contracts were analyzed, which included 118 for construction, 41 for architecture and engineering services, 174 for professional services, 735 for non-professional services, and 3,788 for goods.

The utilization analysis was performed separately for informal and formal prime contracts. The informal levels included contracts \$25,000 and under for construction, contracts \$40,000 and under for architecture and engineering, contracts \$40,000 and under for professional services, contracts \$25,000 and under for non-professional services, and contracts \$25,000 and under for goods. The analysis of formal contracts was limited to contracts under \$500,000 for each industry. *Chapter 6: Prime Contractor Disparity Analysis* presents the statistical analysis of disparity in each of the five industries.





3

SUBCONTRACTOR UTILIZATION ANALYSIS

I. INTRODUCTION

As discussed in *Chapter 2: Prime Contractor Utilization Analysis*, the first step in a disparity study is the analysis of expenditures in the jurisdiction under review to document minority contracting history. The objective of the subcontractor utilization analysis is to determine the level of minority and woman-owned business enterprise (M/WBE) subcontractor utilization by ethnic group compared to non-M/WBE subcontractor utilization. This chapter documents the Dallas/Fort Worth International Airport Board's (DFW) utilization of subcontractors by ethnicity and gender for subcontracts awarded from October 1, 2002 to September 30, 2007.

II. SUBCONTRACTOR UTILIZATION DATA SOURCES

Mason Tillman worked closely with DFW's staff members to reconstruct subcontractor data for construction, architecture and engineering, professional services, and non-professional services contracts. Subcontracts for goods contracts were not included in the analysis because the prime contractors traditionally do not include significant subcontracting activity.

Two sources were used to reconstruct the subcontractor data on construction, architecture and engineering, professional services, and non-professional services contracts valued at \$50,000 or more. DFW provided Mason Tillman with subcontractor records extracted from DFW's subcontractor tracking database and data collected from project files.

The second source was a prime contractor expenditure survey conducted with DFW's prime contractors to request their subcontractors. The prime contractors were asked to provide



the name, award, and payment amounts for each subcontractor used on each of their DFW contracts. Subcontractors identified from the two data sources were then surveyed to verify their participation and payment for each prime contract on which they were listed. DFW staff encouraged the prime contractors and subcontractors to respond to each survey.

A total of 1,449 subcontracts were identified for 193 construction, architecture and engineering, professional services, and non-professional services prime contracts valued at \$50,000 and more. The 1,449 subcontracts were awarded during the five-year study period, October 1, 2002 to September 30, 2007.

The assistance of DFW staff was an essential resource in the compilation of the subcontract records. DFW staff provided invaluable assistance in retrieving critical data from project files. Without DFW staff cooperation, the collection of 1,449 subcontract records would not have been possible.

III. SUBCONTRACTOR UTILIZATION ANALYSIS

As depicted in Table 3.01 below, the 1,449 subcontracts analyzed included 720 construction subcontracts, 309 architecture and engineering subcontracts, 31 professional services subcontracts, and 389 non-professional services subcontracts. The total dollars for subcontracts analyzed were \$387,931,781 with \$206,850,911 for construction subcontracts, \$39,109,383 for architecture and engineering subcontracts, \$1,717,176 for professional services subcontracts, and \$140,254,311 for non-professional services subcontracts.



Table 3.01 Total Subcontract Dollars: All Industries, October 1, 2002 to September 30, 2007

Industry	Total Number of Subcontracts	Total Dollars Expended
Construction	720	\$206,850,911
Architecture and Engineering	309	\$39,109,383
Professional Services	31	\$1,717,176
Non-Professional Services	389	\$140,254,311
Total	1,449	\$387,931,781



A. Construction Utilization: All Subcontracts

1. Construction Subcontracts

Table 3.02 depicts construction subcontracts awarded by prime contractors. Minority Business Enterprises received 22.52 percent of the construction subcontract dollars; Women Business Enterprises received 21.74 percent; and Caucasian Male Business Enterprises received 55.74 percent. These ethnic and gender groups are defined in Table 2.01 of *Chapter 2: Prime Contractor Utilization Analysis*.

African American Businesses received 106 or 14.72 percent of the construction subcontracts during the study period, representing \$21,183,761 or 10.24 percent of the subcontract dollars.

Asian American Businesses received 9 or 1.25 percent of the construction subcontracts during the study period, representing \$2,399,479 or 1.16 percent of the subcontract dollars.

Hispanic American Businesses received 126 or 17.5 percent of the construction subcontracts during the study period, representing \$21,161,182 or 10.23 percent of the subcontract dollars.

Native American Businesses received 14 or 1.94 percent of the construction subcontracts during the study period, representing \$1,835,054 or 0.89 percent of the subcontract dollars.

Minority Business Enterprises received 255 or 35.42 percent of the construction subcontracts during the study period, representing \$46,579,477 or 22.52 percent of the subcontract dollars.

Women Business Enterprises received 195 or 27.08 percent of the construction subcontracts during the study period, representing \$44,970,676 or 21.74 percent of the subcontract dollars.

Minority and Women Business Enterprises received 450 or 62.5 percent of the construction subcontracts during the study period, representing \$91,550,152 or 44.26 percent of the subcontract dollars.

Caucasian Male Business Enterprises received 270 or 37.5 percent of the construction subcontracts during the study period, representing \$115,300,759 or 55.74 percent of the subcontract dollars.



**Table 3.02 Construction Utilization: All Subcontracts,
October 1, 2002 to September 30, 2007**

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	106	14.72%	\$21,183,761	10.24%
Asian Americans	9	1.25%	\$2,399,479	1.16%
Hispanic Americans	126	17.50%	\$21,161,182	10.23%
Native Americans	14	1.94%	\$1,835,054	0.89%
Caucasian Females	195	27.08%	\$44,970,676	21.74%
Caucasian Males	270	37.50%	\$115,300,759	55.74%
TOTAL	720	100.00%	\$206,850,911	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	12	1.67%	\$900,012	0.44%
African American Males	94	13.06%	\$20,283,749	9.81%
Asian American Females	0	0.00%	\$0	0.00%
Asian American Males	9	1.25%	\$2,399,479	1.16%
Hispanic American Females	32	4.44%	\$2,698,048	1.30%
Hispanic American Males	94	13.06%	\$18,463,134	8.93%
Native American Females	2	0.28%	\$90,591	0.04%
Native American Males	12	1.67%	\$1,744,464	0.84%
Caucasian Females	195	27.08%	\$44,970,676	21.74%
Caucasian Males	270	37.50%	\$115,300,759	55.74%
TOTAL	720	100.00%	206,850,911	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	46	6.39%	\$3,688,651	1.78%
Minority Males	209	29.03%	\$42,890,825	20.74%
Caucasian Females	195	27.08%	\$44,970,676	21.74%
Caucasian Males	270	37.50%	\$115,300,759	55.74%
TOTAL	720	100.00%	\$206,850,911	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	255	35.42%	\$46,579,477	22.52%
Women Business Enterprises	195	27.08%	\$44,970,676	21.74%
Minority and Women Business Enterprises	450	62.50%	\$91,550,152	44.26%
Caucasian Male Business Enterprises	270	37.50%	\$115,300,759	55.74%
TOTAL	720	100.00%	\$206,850,911	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



B. Architecture and Engineering Utilization: All Subcontracts

Table 3.03 depicts architecture and engineering subcontracts awarded by prime contractors. Minority Business Enterprises received 42.94 percent of the architecture and engineering subcontract dollars; Women Business Enterprises received 11.8 percent; and Caucasian Male Business Enterprises received 45.26 percent.

African American Businesses received 56 or 18.12 percent of the architecture and engineering subcontracts during the study period, representing \$7,342,919 or 18.78 percent of the subcontracting dollars.

Asian American Businesses received 20 or 6.47 percent of the architecture and engineering subcontracts during the study period, representing \$3,798,186 or 9.71 percent of the subcontracting dollars.

Hispanic American Businesses received 43 or 13.92 percent of the architecture and engineering subcontracts during the study period, representing \$4,907,378 or 12.55 percent of the subcontracting dollars.

Native American Businesses received 2 or 0.65 percent of the architecture and engineering subcontracts during the study period, representing \$744,404 or 1.9 percent of the subcontract dollars.

Minority Business Enterprises received 121 or 39.16 percent of the architecture and engineering subcontracts during the study period, representing \$16,792,886 or 42.94 percent of the subcontract dollars.

Women Business Enterprises received 66 or 21.36 percent of the architecture and engineering subcontracts during the study period, representing \$4,616,461 or 11.8 percent of the subcontract dollars.

Minority and Women Business Enterprises received 187 or 60.52 percent of the architecture and engineering subcontracts during the study period, representing \$21,409,348 or 54.74 percent of the subcontract dollars.

Caucasian Male Business Enterprises received 122 or 39.48 percent of the architecture and engineering subcontracts during the study period, representing \$17,700,035 or 45.26 percent of the subcontract dollars.



Table 3.03 Architecture and Engineering Utilization: All Subcontracts, October 1, 2002 to September 30, 2007

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	56	18.12%	\$7,342,919	18.78%
Asian Americans	20	6.47%	\$3,798,186	9.71%
Hispanic Americans	43	13.92%	\$4,907,378	12.55%
Native Americans	2	0.65%	\$744,404	1.90%
Caucasian Females	66	21.36%	\$4,616,461	11.80%
Caucasian Males	122	39.48%	\$17,700,035	45.26%
TOTAL	309	100.00%	\$39,109,383	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	7	2.27%	\$792,283	2.03%
African American Males	49	15.86%	\$6,550,635	16.75%
Asian American Females	2	0.65%	\$32,772	0.08%
Asian American Males	18	5.83%	\$3,765,414	9.63%
Hispanic American Females	7	2.27%	\$781,772	2.00%
Hispanic American Males	36	11.65%	\$4,125,606	10.55%
Native American Females	1	0.32%	\$715,457	1.83%
Native American Males	1	0.32%	\$28,947	0.07%
Caucasian Females	66	21.36%	\$4,616,461	11.80%
Caucasian Males	122	39.48%	\$17,700,035	45.26%
TOTAL	309	100.00%	\$39,109,383	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	17	5.50%	\$2,322,283	5.94%
Minority Males	104	33.66%	\$14,470,603	37.00%
Caucasian Females	66	21.36%	\$4,616,461	11.80%
Caucasian Males	122	39.48%	\$17,700,035	45.26%
TOTAL	309	100.00%	\$39,109,383	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	121	39.16%	\$16,792,886	42.94%
Women Business Enterprises	66	21.36%	\$4,616,461	11.80%
Minority and Women Business Enterprises	187	60.52%	\$21,409,348	54.74%
Caucasian Male Business Enterprises	122	39.48%	\$17,700,035	45.26%
TOTAL	309	100.00%	\$39,109,383	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



C. Professional Services Utilization: All Subcontracts

Table 3.04 depicts professional services subcontracts awarded by prime contractors. Minority Business Enterprises received 75.9 percent of the professional services subcontract dollars; Women Business Enterprises received 11.9 percent; and Caucasian Male Business Enterprises received 12.2 percent.

African American Businesses received 5 or 16.13 percent of the professional services subcontracts during the study period, representing \$289,280 or 16.85 percent of the subcontracting dollars.

Asian American Businesses received 3 or 9.68 percent of the professional services subcontracts during the study period, representing \$248,288 or 14.46 percent of the subcontracting dollars.

Hispanic American Businesses received 11 or 35.48 percent of the professional services subcontracts during the study period, representing \$733,363 or 42.71 percent of the subcontracting dollars.

Native American Businesses received 1 or 3.23 percent of the professional services subcontracts during the study period, representing \$32,375 or 1.89 percent of the subcontract dollars.

Minority Business Enterprises received 20 or 64.52 percent of the professional services subcontracts during the study period, representing \$1,303,306 or 75.9 percent of the subcontract dollars.

Women Business Enterprises received 6 or 19.35 percent of the professional services subcontracts during the study period, representing \$204,292 or 11.9 percent of the subcontract dollars.

Minority and Women Business Enterprises received 26 or 83.87 percent of the professional services subcontracts during the study period, representing \$1,507,598 or 87.8 percent of the subcontract dollars.

Caucasian Male Business Enterprises received 5 or 16.13 percent of the professional services subcontracts during the study period, representing \$209,577 or 12.2 percent of the subcontract dollars.



Table 3.04 Professional Services Utilization: All Subcontracts, October 1, 2002 to September 30, 2007

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	5	16.13%	\$289,280	16.85%
Asian Americans	3	9.68%	\$248,288	14.46%
Hispanic Americans	11	35.48%	\$733,363	42.71%
Native Americans	1	3.23%	\$32,375	1.89%
Caucasian Females	6	19.35%	\$204,292	11.90%
Caucasian Males	5	16.13%	\$209,577	12.20%
TOTAL	31	100.00%	\$1,717,176	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	2	6.45%	\$70,144	4.08%
African American Males	3	9.68%	\$219,136	12.76%
Asian American Females	1	3.23%	\$114,525	6.67%
Asian American Males	2	6.45%	\$133,763	7.79%
Hispanic American Females	2	6.45%	\$267,126	15.56%
Hispanic American Males	9	29.03%	\$466,237	27.15%
Native American Females	0	0.00%	\$0	0.00%
Native American Males	1	3.23%	\$32,375	1.89%
Caucasian Females	6	19.35%	\$204,292	11.90%
Caucasian Males	5	16.13%	\$209,577	12.20%
TOTAL	31	100.00%	1,717,176	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	5	16.13%	\$451,795	26.31%
Minority Males	15	48.39%	\$851,511	49.59%
Caucasian Females	6	19.35%	\$204,292	11.90%
Caucasian Males	5	16.13%	\$209,577	12.20%
TOTAL	31	100.00%	\$1,717,176	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	20	64.52%	\$1,303,306	75.90%
Women Business Enterprises	6	19.35%	\$204,292	11.90%
Minority and Women Business Enterprises	26	83.87%	\$1,507,598	87.80%
Caucasian Male Business Enterprises	5	16.13%	\$209,577	12.20%
TOTAL	31	100.00%	\$1,717,176	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



D. Non-Professional Services Utilization: All Subcontracts

Table 3.05 depicts non-professional services subcontracts awarded by prime contractors. Minority Business Enterprises received 47.49 percent of the non-professional services subcontract dollars; Women Business Enterprises received 9.22 percent; and Caucasian Male Business Enterprises received 43.29 percent.

African American Businesses received 97 or 24.94 percent of the non-professional services subcontracts during the study period, representing \$33,823,243 or 24.12 percent of the subcontracting dollars.

Asian American Businesses received 40 or 10.28 percent of the non-professional services subcontracts during the study period, representing \$19,327,419 or 13.78 percent of the subcontracting dollars.

Hispanic American Businesses received 57 or 14.65 percent of the non-professional services subcontracts during the study period, representing \$12,709,649 or 9.06 percent of the subcontracting dollars.

Native American Businesses received 8 or 2.06 percent of the non-professional services subcontracts during the study period, representing \$739,685 or 0.53 percent of the subcontract dollars.

Minority Business Enterprises received 202 or 51.93 percent of the non-professional services subcontracts during the study period, representing \$66,599,996 or 47.49 percent of the subcontract dollars.

Women Business Enterprises received 92 or 23.65 percent of the non-professional services subcontracts during the study period, representing \$12,937,829 or 9.22 percent of the subcontract dollars.

Minority and Women Business Enterprises received 294 or 75.58 percent of the non-professional services subcontracts during the study period, representing \$79,537,826 or 56.71 percent of the subcontract dollars.

Caucasian Male Business Enterprises received 95 or 24.42 percent of the non-professional services subcontracts during the study period, representing \$60,716,486 or 43.29 percent of the subcontract dollars.



Table 3.05 Non-Professional Services Utilization: All Subcontracts, October 1, 2002 to September 30, 2007

Ethnicity[^]	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African Americans	97	24.94%	\$33,823,243	24.12%
Asian Americans	40	10.28%	\$19,327,419	13.78%
Hispanic Americans	57	14.65%	\$12,709,649	9.06%
Native Americans	8	2.06%	\$739,685	0.53%
Caucasian Females	92	23.65%	\$12,937,829	9.22%
Caucasian Males	95	24.42%	\$60,716,486	43.29%
TOTAL	389	100.00%	\$140,254,311	100.00%
Ethnicity and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
African American Females	38	9.77%	\$8,127,430	5.79%
African American Males	59	15.17%	\$25,695,813	18.32%
Asian American Females	13	3.34%	\$11,011,609	7.85%
Asian American Males	27	6.94%	\$8,315,811	5.93%
Hispanic American Females	15	3.86%	\$1,481,211	1.06%
Hispanic American Males	42	10.80%	\$11,228,437	8.01%
Native American Females	2	0.51%	\$62,475	0.04%
Native American Males	6	1.54%	\$677,210	0.48%
Caucasian Females	92	23.65%	\$12,937,829	9.22%
Caucasian Males	95	24.42%	\$60,716,486	43.29%
TOTAL	389	100.00%	140,254,311	100.00%
Minority and Gender	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Females	68	17.48%	\$20,682,726	14.75%
Minority Males	134	34.45%	\$45,917,271	32.74%
Caucasian Females	92	23.65%	\$12,937,829	9.22%
Caucasian Males	95	24.42%	\$60,716,486	43.29%
TOTAL	389	100.00%	\$140,254,311	100.00%
Minority and Women	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Minority Business Enterprises	202	51.93%	\$66,599,996	47.49%
Women Business Enterprises	92	23.65%	\$12,937,829	9.22%
Minority and Women Business Enterprises	294	75.58%	\$79,537,826	56.71%
Caucasian Male Business Enterprises	95	24.42%	\$60,716,486	43.29%
TOTAL	389	100.00%	\$140,254,311	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



4

MARKET AREA ANALYSIS

I. MARKET AREA DEFINITION

A. Legal Criteria for Geographic Market Area

The Supreme Court's decision in *City of Richmond v. J.A. Croson Co.*¹ held that programs established by local governments to set goals for the participation of minority and woman-owned firms, must be supported by evidence of past discrimination in the awarding of their contracts.

Prior to the *Croson* decision, many agencies and jurisdictions implementing race-conscious programs did so without developing a detailed public record to document discrimination in their awarding of contracts. Instead, they relied upon common knowledge and what was viewed as widely-recognized patterns of discrimination, both local and national.²

Croson established that a local government could not rely on society-wide discrimination as the basis for a race-based program, but, instead, was required to identify discrimination within its own jurisdiction.³ In *Croson*, the Court found the City of Richmond's Minority Business Enterprise (MBE) construction program to be unconstitutional because there was insufficient evidence of discrimination in the *local construction market*.

Croson was explicit in saying that the *local construction market* was the appropriate geographical framework within which to perform statistical comparisons of business availability and business utilization. Therefore, the identification of the local market area

¹ *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469 (1989).

² *United Steelworkers v. Weber*, 433 U.S. 193, 198, n. 1 (1979).

³ *Croson*, 488 U.S. at 497 (1989).



is particularly important because that factor establishes the parameters within which to conduct a disparity study.

B. Application of the Croson Standard

While *Croson* emphasized the importance of the local market area, it provided little assistance in defining its parameters.⁴ It, however, is informative to review the Court's definition of the City of Richmond's market area. In discussing the scope of the constitutional violation that must be investigated, the Court interchangeably used the terms "relevant market,"⁵ "Richmond construction industry,"⁶ and "city's construction industry"⁷ to define the proper scope of the examination of the existence of discrimination within the City. This interchangeable use of terms lends support to a definition of market area that coincides with the boundaries of a jurisdiction.

In analyzing the cases following *Croson*, a pattern emerges that provides additional guidance. The body of cases examining market area support a definition of market area that is reasonable.⁸ In *Cone Corporation v. Hillsborough County*,⁹ the Eleventh Circuit Court of Appeals considered a study in support of Florida's Hillsborough County MBE program, which used minority contractors located in the County as the measure of available firms. The program was found to be constitutional under the compelling governmental interest element of the strict scrutiny standard.

Hillsborough County's program was based on statistics indicating that specific discrimination existed in the construction contracts awarded by the County, not in the construction industry in general. Hillsborough County had extracted data from within its own jurisdictional boundaries and assessed the percentage of minority businesses available in Hillsborough County. The court stated that the study was properly conducted within the "local construction industry."¹⁰

⁴ *Adarand*, which extended *Croson*'s strict scrutiny standard to federal programs, did not change *Croson*'s approach to market area where federal funds are involved.

⁵ *Croson*, 488 U.S. at 471 (1989).

⁶ *Id.* at 500.

⁷ *Id.* at 470.

⁸ See e.g., *Concrete Works of Colorado v. City of Denver, Colorado*, 36 F.3d 1513, 1528 (10th Cir. 1994).

⁹ *Cone Corporation v. Hillsborough County*, 908 F.2d 908 (11th Cir. 1990).

¹⁰ *Id.* at 915.



Similarly, in *Associated General Contractors v. Coalition for Economic Equity (AGCCII)*,¹¹ the Ninth Circuit Court of Appeals found the City and County of San Francisco’s MBE program to have the factual predicate necessary to survive strict scrutiny. The San Francisco MBE program was supported by a study that assessed the number of available MBE contractors within the City and County of San Francisco. The court found it appropriate to use the City and County as the relevant market area within which to conduct a disparity study.¹²

In *Coral Construction v. King County*, the Ninth Circuit Court of Appeals held that “a set-aside program is valid only if actual, identifiable discrimination has occurred within the local industry affected by the program.”¹³ In support of its MBE program, the State of Washington’s King County offered studies compiled by other jurisdictions, including entities completely within the County or coterminous with the boundaries of the County, as well as a separate jurisdiction completely outside of the County. The plaintiffs contended that *Croson* required King County to compile its own data and cited *Croson* as prohibiting data sharing.

The court found that data sharing could potentially lead to the improper use of societal discrimination data as the factual basis for a local MBE program and that innocent third parties could be unnecessarily burdened if an MBE program were based on outside data. However, the court also found that the data from entities within the County and from coterminous jurisdictions was relevant to discrimination in the County. They also found that the data posed no risk of unfairly burdening innocent third parties.

Concerning data gathered by a neighboring county, the court concluded that this data could not be used to support King County’s MBE program. The court noted, “It is vital that a race-conscious program align itself as closely to the scope of the problem legitimately sought to be rectified by the governmental entity. To prevent overbreadth, the enacting jurisdiction should limit its factual inquiry to the presence of discrimination within its own boundaries.”¹⁴ However, the court did note that the “world of contracting does not conform itself neatly to jurisdictional boundaries.”¹⁵

There are other situations where courts have approved a definition of market area that extends beyond a jurisdiction’s geographic boundaries. In *Concrete Works v. City and*

¹¹ *Associated General Contractors of California v. Coalition for Economic Equity and City and County of San Francisco*, 950 F.2d 1401 (9th Cir. 1991).

¹² *Id.* at 1415.

¹³ *Coral Construction Co. v. King County*, 941 F.2d 910 (9th Cir. 1991), *cert. denied*, 112 S.Ct. 875 (1992).

¹⁴ *Id.* at 917.

¹⁵ *Id.*



County of Denver,¹⁶ the Tenth Circuit Court of Appeals directly addressed the issue of whether extra-jurisdictional evidence of discrimination can be used to determine “local market area” for a disparity study. In *Concrete Works*, the defendant relied on evidence of discrimination in the six-county Denver Metropolitan Statistical Area (MSA) to support its MBE program. Plaintiffs argued that the federal constitution prohibited consideration of evidence beyond jurisdictional boundaries. The Court of Appeals disagreed.

Critical to the court’s acceptance of the Denver MSA as the relevant local market, was the finding that more than 80 percent of construction and design contracts awarded by Denver were awarded to contractors within the MSA. Another consideration was that Denver’s analysis was based on U.S. Census data, which was available for the Denver MSA but not for the city itself. There was no undue burden placed on nonculpable parties, as Denver had conducted a majority of its construction contracts within the area defined as the local market. Citing *AGCCII*,¹⁷ the court noted, “that any plan that extends race-conscious remedies beyond territorial boundaries must be based on very specific findings that actions that the city has taken in the past have visited racial discrimination on such individuals.”¹⁸

Similarly, New York State conducted a disparity study in which the geographic market consisted of New York State and eight counties in northern New Jersey. The geographic market was defined as the area encompassing the location of businesses which received more than 90 percent of the dollar value of all contracts awarded by the agency.¹⁹

State and local governments must pay special attention to the geographical scope of their disparity studies. *Croson* determined that the statistical analysis should focus on the number of qualified minority individuals or qualified minority business owners in the government’s marketplace.²⁰ The text of *Croson* itself suggests that the geographical boundaries of the government entity comprise an appropriate market area, and other courts have agreed with this finding. In addition, other cases have approved the use of a percentage of the dollars spent by an agency on contracting.

It follows then that an entity may limit consideration of evidence of discrimination to discrimination occurring within its own jurisdiction. Under certain circumstances, extra-jurisdictional evidence can be used if the percentage of governmental dollars supports such boundaries. Taken collectively, the cases support a definition of market area that is reasonable rather than dictating a specific or unreasonably rigid formula. In other words,

¹⁶ *Concrete Works*, 36 F.3d 1513, 1528 (10th Cir. 1994).

¹⁷ *AGCCII*, 950 F.2d 1401 (9th Cir. 1991).

¹⁸ *Concrete Works*, 36 F.3d at 1528 (10th Cir. 1994).

¹⁹ *Opportunity Denied! New York State’s Study*, 26 *Urban Lawyer* No. 3, Summer 1994.

²⁰ *Croson*, 488 U.S. at 501 (1989).



since *Croson* and its progeny did not provide a bright line rule for local market area, that determination should be fact-based and case-specific.

II. MARKET AREA ANALYSIS

Although *Croson* and its progeny do not provide a bright line rule for the delineation of the local market area, taken collectively, the case law supports a definition of market area as within the jurisdiction's own boundaries. It is within the market area where an entity may limit consideration of evidence of discrimination. A review of the contracts awarded by the Dallas/Fort Worth International Airport Board (DFW) shows that the majority of its 4,856 contract awards and the contract dollars were awarded to Dallas County and Tarrant County businesses. Additionally, the distribution of contracts and dollars awarded within each of the five industries shows a pattern of contracting with businesses from Dallas and Tarrant counties. A review of the contracts and dollars awarded to businesses in these two counties is depicted below:



1. Distribution of All Contracts

DFW awarded 4,856 contracts and \$995,804,354 during the October 1, 2002 to September 30, 2007 study period. 64.85 percent of these contracts and 58.76 percent, of the dollars were awarded to Dallas County and Tarrant County-based firms. The distribution of the contracts and dollars awarded is depicted in Table 4.01.

Table 4.01 Distribution of All Contracts Awarded October 1, 2002 to September 30, 2007

County	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Dallas	1,911	39.35%	\$485,799,732.43	48.78%
Harris	22	0.45%	\$113,457,113.85	11.39%
Tarrant	1,238	25.49%	\$99,331,823.16	9.98%
Out of State - UT	7	0.14%	\$91,655,587.33	9.20%
Remaining*	1,678	34.56%	\$205,560,096.78	20.64%
Total	4,856	100.00%	\$995,804,353.55	100.00%

*Remaining includes Other Texas Counties, Out of Texas, and Out of U.S.



2. Distribution of Construction Contracts

DFW awarded 118 construction contracts valued at \$392,436,277 during the study period. 88.98 percent of the construction contracts and 80.72 percent of the dollars were awarded to Dallas County and Tarrant County-based firms.

The distribution of the contracts and dollars awarded to firms within and outside of Dallas and Tarrant counties is depicted in Table 4.02.

**Table 4.02 Distribution of Construction Contracts Awarded
October 1, 2002 to September 30, 2007**

County	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Dallas	92	77.97%	\$289,646,267.36	73.81%
Harris	1	0.85%	\$42,601,314.24	10.86%
Denton	4	3.39%	\$28,338,051.62	7.22%
Tarrant	13	11.02%	\$27,138,449.58	6.92%
Bell	1	0.85%	\$1,561,415.00	0.40%
Remaining*	7	5.93%	\$3,150,778.96	0.80%
Total	118	100.00%	\$392,436,276.76	100.00%

*Remaining includes Other Texas Counties, Out of Texas, and Out of U.S.



3. Distribution of Architecture and Engineering Contracts

DFW awarded 41 architecture and engineering contracts valued at \$69,427,262 during the October 1, 2002 to September 30, 2007 study period. 68.29 percent of the architecture and engineering contracts and 70.1 percent of the dollars were awarded to Dallas County and Tarrant County-based firms.

The distribution of the contracts and dollars awarded to firms within and outside of Dallas and Tarrant counties is depicted in Table 4.03.

Table 4.03 Distribution of Architecture and Engineering Contracts Awarded October 1, 2002 to September 30, 2007

County	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Dallas	15	36.59%	\$33,320,566.30	47.99%
Harris	2	4.88%	\$18,392,690.19	26.49%
Tarrant	13	31.71%	\$15,349,100.54	22.11%
Remaining*	11	26.83%	\$2,364,905.30	3.41%
Total	41	100.00%	\$69,427,262.33	100.00%

*Remaining includes Other Texas Counties, Out of Texas, and Out of U.S.



4. Distribution of Professional Services Contracts

DFW awarded 174 professional services contracts valued at \$25,638,325 during the October 1, 2002 to September 30, 2007 study period. 38.51 percent of the professional services contracts and 75.48 percent of the dollars were awarded to Dallas County and Tarrant County-based firms.

The distribution of the contracts awarded to firms within and outside of Dallas and Tarrant counties is depicted in Table 4.04.

**Table 4.04 Distribution of Professional Services Contracts
Awarded October 1, 2002 to September 30, 2007**

County	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Dallas	52	29.89%	\$17,775,178.77	69.33%
Travis	18	10.34%	\$1,648,520.30	6.43%
Tarrant	15	8.62%	\$1,576,304.26	6.15%
Out of State - DC	5	2.87%	\$1,323,629.34	5.16%
Remaining*	84	48.28%	\$3,314,692.24	12.93%
Total	174	100.00%	\$25,638,324.91	100.00%

*Remaining includes Other Texas Counties, Out of Texas, and Out of U.S.



5. Distribution of Non-Professional Services Contracts

DFW awarded 735 non-professional services contracts valued at \$434,413,844 dollars during the October 1, 2002 to September 30, 2007 study period. 54.83 percent of the non-professional services contracts and 35.76 percent of the dollars were awarded to Dallas County and Tarrant County-based firms.

The distribution of the contracts awarded to firms within and outside of Dallas and Tarrant counties is depicted in Table 4.05.

Table 4.05 Distribution of Non-Professional Services Contracts Awarded October 1, 2002 to September 30, 2007

County	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Dallas	297	40.41%	\$107,751,059.01	24.80%
Out of State - UT	6	0.82%	\$87,758,383.33	20.20%
Out of State - PA	10	1.36%	\$61,246,353.52	14.10%
Harris	6	0.82%	\$52,340,832.25	12.05%
Tarrant	106	14.42%	\$38,908,875.41	8.96%
Out of State - FL	6	0.82%	\$22,406,759.25	5.16%
Remaining*	304	41.36%	\$64,001,581.24	14.73%
Total	735	100.00%	\$434,413,844.00	100.00%

*Remaining includes Other Texas Counties, Out of Texas, and Out of U.S.



6. Distribution of Goods Contracts

DFW awarded 3,788 goods contracts valued at \$73,888,646 dollars during the October 1, 2002 to September 30, 2007 study period. 67.21 percent of the goods contracts and 72.63 percent of the dollars were awarded to Dallas County and Tarrant County-based firms.

The distribution of the contracts awarded to firms within and outside of Dallas and Tarrant counties is depicted in Table 4.06.

Table 4.06 Distribution of Goods Contracts Awarded October 1, 2002 to September 30, 2007

County	Number of Contracts	Percent of Contracts	Total Dollars	Percent of Dollars
Dallas	1,455	38.41%	\$37,306,660.99	50.49%
Tarrant	1,091	28.80%	\$16,359,093.38	22.14%
Unknown	603	15.92%	\$8,084,940.70	10.94%
Out of State - UT	1	0.03%	\$3,897,204.00	5.27%
Out of State - GA	3	0.08%	\$1,725,008.80	2.33%
Out of State - FL	24	0.63%	\$1,419,214.52	1.92%
Denton	176	4.65%	\$1,298,364.47	1.76%
Out of Country - Canada	18	0.48%	\$978,509.83	1.32%
Remaining*	417	11.01%	\$2,819,648.87	3.82%
Total	3,788	100.00%	\$73,888,645.55	100.00%

*Remaining includes Other Texas Counties, Out of Texas, and Out of U.S.

7. Market Area Determination

More than 64 percent of DFW's contracts and 58 percent of dollars were awarded to businesses located in Dallas and Tarrant counties. Given the geographical distribution of the contracts awarded by DFW and the requirements set forth in the applicable case law, the study's market area is determined to be Dallas County and Tarrant County.



III. DALLAS/FORT WORTH INTERNATIONAL AIRPORT' BOARD'S MARKET AREA

The following table depicts the overall number of construction, architecture and engineering, professional services, non-professional services, and goods contracts awarded by DFW between October 1, 2002 to September 30, 2007.

DFW awarded 4,856 construction, architecture and engineering, professional services, non-professional services, and goods contracts valued at \$995,804,354 during the study period of October 1, 2002 to September 30, 2007. A total of 64.85 percent of the contracts and 58.76 percent of the dollars were awarded to businesses in the market area of Dallas County and Tarrant County. The analysis of discrimination has been limited to that occurring within this market area.

Table 4.07 depicts the overall number of construction, architecture and engineering, professional services, non-professional services, and goods contracts and the dollar value of those contracts awarded by DFW between October 1, 2002 to September 30, 2007. Of the 4,856 contracts awarded by DFW during the study period, 3,149 or 64.85 percent were awarded to market area businesses. The dollar value of contracts awarded to market area businesses was \$585,131,556 or 58.76 percent of all contract dollars awarded.

The breakdown of contracts awarded to market area businesses is as follows:

Construction Contracts: 105 or 88.98 percent of these contracts were awarded to market area businesses. The dollar value of those contracts was \$316,784,717 or 80.72 percent of the total construction dollars.

Architecture and Engineering Contracts: 28 or 68.29 percent of these contracts were awarded to market area businesses. The dollar value of those contracts was \$48,669,667 or 70.1 percent of the total architecture and engineering dollars.

Professional Services Contracts: 67 or 38.51 percent of these contracts were awarded to market area businesses. The dollar value of those contracts was \$19,351,483 or 75.48 percent of the total professional services dollars.²¹

Non-Professional Services Contracts: 403 or 54.83 percent were awarded to market area businesses. The dollar value of those contracts was \$146,659,934 or 33.76 percent of the total non-professional services dollars.²²

²¹ 23.58 percent of the total professional services dollars were awarded to businesses outside Texas.

²² 53.09 percent of the total non-professional services dollars were awarded to businesses outside Texas.



Goods Contracts: 2,546 or 67.21 percent were awarded to market area businesses. The dollar value of those contracts was \$53,665,754 or 72.63 percent of the total goods dollars.²³

Table 4.07 DFW Market Area: October 1, 2002 to September 30, 2007

Market Area	Number of Contracts	Percent of Contracts	Amount of Dollars	Percent of Dollars
Combined Types of Work				
Market Area	3,149	64.85%	\$585,131,556	58.76%
Outside Market Area	1,707	35.15%	\$410,672,798	41.24%
Total	4,856	100.00%	\$995,804,354	100.00%
Construction				
Market Area	105	88.98%	\$316,784,717	80.72%
Outside Market Area	13	11.02%	\$75,651,560	19.28%
Total	118	100.00%	\$392,436,277	100.00%
Architecture and Engineering				
Market Area	28	68.29%	\$48,669,667	70.10%
Outside Market Area	13	31.71%	\$20,757,595	29.90%
Total	41	100.00%	\$69,427,262	100.00%
Professional Services				
Market Area	67	38.51%	\$19,351,483	75.48%
Outside Market Area	107	61.49%	\$6,286,842	24.52%
Total	174	100.00%	\$25,638,325	100.00%
Non-Professional Services				
Market Area	403	54.83%	\$146,659,934	33.76%
Outside Market Area	332	45.17%	\$287,753,910	66.24%
Total	735	100.00%	\$434,413,844	100.00%
Goods				
Market Area	2,546	67.21%	\$53,665,754	72.63%
Outside Market Area	1,242	32.79%	\$20,222,891	27.37%
Total	3,788	100.00%	\$73,888,646	100.00%

²³ 24.93 percent of the total goods dollars were awarded to businesses outside Texas.



5

AVAILABILITY ANALYSIS

I. INTRODUCTION

Availability is defined, according to *Croson*, as the number of businesses in the jurisdiction's market area that are willing and able to provide goods or services.¹ To determine availability, minority and woman-owned business enterprises (M/WBEs) and non-M/WBEs within the jurisdiction's market area that are willing and able to provide the goods and services need to be enumerated. The analysis presented in *Chapter 4: Market Area Analysis* defined Dallas and Tarrant counties as the market area for this Study. This determination was made because most of the utilized businesses are domiciled in these two counties.

When considering sources for determining the number of willing and able M/WBEs and non-M/WBEs, the selection must be based on whether two significant aspects about the population in question can be gauged from the sources. A business' interest in doing business with the jurisdiction, as implied by the term "willing" and its ability or capacity to provide a service or good, as implied by the term "able" must be discerned.

The compiled list of available businesses includes minority, women, and Caucasian male-owned businesses in the areas of construction, architecture and engineering, professional services, non-professional services, and goods. Dallas/Fort Worth International Airport Board (DFW) and the Consortium member (the Consortium)² records, government certification records, business association membership listings, and an outreach campaign were used to compile the documents used as sources for available market area businesses. Separate availability lists were compiled for prime contractors and subcontractors within the five industries. The distribution of available businesses by ethnicity and gender and industry are presented in this chapter.

¹ *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 509 (1989).

² The Consortium includes the City of Arlington, City of Fort Worth, Fort Worth Independent School District, Fort Worth Transportation Authority, Dallas/Fort Worth International Airport Board, and North Texas Tollway Authority.



II. PRIME CONTRACTOR AVAILABILITY DATA SOURCES

A. Identification of Willing Businesses Within The Market Area

Mason Tillman identified businesses in the two county market area that provided goods and services that DFW procures, using four sources. The sources identified are the Consortium utilized vendors and unsuccessful bidders, government certification lists, business outreach, and business association membership lists. Only businesses that were determined to be willing were added to the availability list. All businesses identified as willing from more than one source were counted only once. The base document in the availability list was the utilized vendors. To this list was added the unsuccessful bidders, businesses identified through government certification lists, and the willing businesses identified from the business association membership lists. The four sources were ranked with the highest rank assigned to the utilized vendors.

The utilized vendors and unsuccessful bidders were secured from DFW and the Consortium records. The certified lists were collected from agencies which certify businesses as local, small, minority and woman-owned. The list of M/W/DBEs maintained by the North Central Texas Regional Certification Agency (NCTRCA) was also collected.

Extensive outreach to business associations in Dallas and Tarrant counties was performed to identify additional businesses willing to contract with DFW and the Consortium. Written and telephone contact with organizations and local governments was used to collect membership lists. From the combined effort 18,764 unique market area businesses were identified.

An account of the willing businesses derived by source is listed below:

1. DFW and The Consortium Records

All of the Consortium utilized vendors and unsuccessful bidders were determined to be willing. There were 19,063 utilized and unsuccessful businesses. To the availability list, 9,684 unique utilized and unsuccessful bidders were added.

2. Government Certification Lists

Certification lists from state and government agencies were collected. There were 12,698 certified businesses compiled from six agencies and all were determined to be willing. From these sources 8,870 unique certified businesses were added to the availability list.



3. Identification of Business Association Membership Lists

Mason Tillman identified 27 lists of businesses within the market area. Membership lists were obtained from 22 entities. From the 22 business association membership lists, 5,990 businesses were identified. Of the 5,990 businesses, there were 3,411 unique businesses that offered the goods and services DFW and the Consortium procures. The unique list was queried and businesses without a telephone number were excluded. There were 3,287 businesses with telephone numbers. These businesses were surveyed to determine their willingness to contract with DFW and the Consortium. There were 210 unique businesses added to the availability list.

B. Prime Contractor Sources

Table 5.01 lists the government and business association sources from which the willing businesses were compiled.

Table 5.01 Prime Contractor Availability Data Sources

Source	Type of Information
DFW and the Consortium Records	
City of Arlington Utilized Vendors	M/WBEs and non-M/WBEs
Dallas/Fort Worth International Airport Board Utilized Vendors	M/WBEs and non-M/WBEs
City of Fort Worth Utilized Vendors	M/WBEs and non-M/WBEs
Fort Worth Independent School District Utilized Vendors	M/WBEs and non-M/WBEs
Fort Worth Transportation Authority Utilized Vendors	M/W/DBEs and non-M/W/DBEs
North Texas Tollway Authority Utilized Vendors	M/WBEs and non-M/WBEs
City of Arlington Bidders List	M/WBEs and non-M/WBEs
Dallas/Fort Worth International Airport Board Bidders List	M/WBEs and non-M/WBEs
City of Fort Worth Bidders List	M/WBEs and non-M/WBEs
Fort Worth Independent School District Bidders List	M/WBEs and non-M/WBEs
Fort Worth Transportation Authority Bidders List	M/W/DBEs and non-M/W/DBEs
North Texas Tollway Authority Bidders List	M/WBEs and non-M/WBEs



Source	Type of Information
Government Certification Lists	
State of Texas Centralized Master Bidders List (CMBL)	M/WBEs and non-M/WBEs
State of Texas Historically Underutilized Business (HUB) Directory	HUBs
Dallas City Hall M/WBE Directory	M/WBEs
North Central Texas Regional Certification Agency (Dallas and Tarrant Counties)	M/W/DBEs and non-M/W/DBEs
Texas Unified Certification Program Disadvantaged Business Enterprise Information Directory, Dallas and Tarrant Counties	DBEs
United States Small Business Administration: Procurement Marketing and Access Network, Dallas and Tarrant Counties	M/WBEs and non-M/WBEs
Business Association Membership/Licensing Board Lists	
American Institute of Architects	M/WBEs and non-M/WBEs
Apartment Association of Tarrant County	M/WBEs and non-M/WBEs
Associated Builders and Contractors	M/WBEs and non-M/WBEs
Black Contractors Associations, Inc. Directory	M/WBEs and non-M/WBEs
Dallas Black Chamber of Commerce	M/WBEs and non-M/WBEs
Dallas/Fort Worth Minority Business Development Council	M/WBEs and non-M/WBEs
Fort Worth Hispanic Chamber of Commerce	M/WBEs and non-M/WBEs
Greater Dallas Asian American Chamber of Commerce	M/WBEs and non-M/WBEs
Greater Dallas Hispanic Chamber of Commerce	M/WBEs and non-M/WBEs
Fort Worth Hispanic Chamber of Commerce	M/WBEs and non-M/WBEs
Hispanic Contractors Association	M/WBEs and non-M/WBEs
Mechanical Contractors Association of Dallas	M/WBEs and non-M/WBEs
Mechanical Contractors Association of Texas	M/WBEs and non-M/WBEs
National Minority Women Business Enterprise Directory, Dallas and Tarrant Counties	M/WBEs
National Association of Women Business Owners	WBEs
National Electrical Contractors Association - North Texas	M/WBEs and non-M/WBEs
Native American Indian Chamber of Commerce	M/WBEs and non-M/WBEs



Source	Type of Information
Northwest Metroport Chamber of Commerce	M/WBEs and non-M/WBEs
Saginaw Area Chamber of Commerce	M/WBEs and non-M/WBEs
Texas Board of Professional Engineers	M/WBEs and non-M/WBEs
White Settlement Area Businesses List	M/WBEs and non-M/WBEs
White Settlement Area Chamber of Commerce	M/WBEs and non-M/WBEs
Women's Business Council - Southwest	WBEs

C. Determination of Willingness

All businesses used in the availability analysis were determined to be willing to contract with DFW and the Consortium. Willingness is defined in *Croson* and its progeny as a business' interest in doing government contracting. This term is discussed in detail in *Volume 1 Chapter 1: Legal Analysis* of this Report. Businesses identified from the 41 sources listed in Table 5.01 have demonstrated their willingness to perform on public contracts. To be classified as willing the business either had bid on a DFW or Consortium contract, secured government certification, responded to the outreach campaign conducted in conjunction with this Study, or was listed on a business organization membership list and affirmed its interest in contracting with DFW and the Consortium through the survey. It was presumed that companies that sought government contracts or certification were willing to contract with DFW and the Consortium.



D. Distribution of Available Prime Contractors by Source, Ethnicity, and Gender

Tables 5.02 through 5.07 present the distribution of willing prime contractors by the source. The 36 sources listed in Table 5.01 are ranked. The highest ranked source was the prime contractors utilized by DFW and the Consortium. Each ranked business is *counted only once*. For example, a utilized prime contractor counted once in the prime contractor utilization source will not be counted a second time as a bidder, as a certified business, or as a company identified during outreach.

As noted in Table 5.02, 87.79 percent of the businesses on the unique list of available prime contractors were obtained from DFW and the Consortium records of utilized contractors, unsuccessful bidders, and government certification lists. Companies identified through business outreach and the business association membership lists represent 12.21 percent of the willing businesses.

Table 5.02 Distribution of Prime Contractor Availability Data Sources, All Industries

Sources	M/WBEs Percentage	Non-M/WBEs Percentage	Source Percentage
Utilized Prime Contractors	11.12%	58.11%	32.54%
Bidders Lists	18.39%	6.91%	13.16%
Government Certification Lists	57.91%	2.15%	32.50%
SBA Pro-Net	5.99%	13.92%	9.60%
Subtotal	93.41%	81.09%	87.79%
Willingness Survey	6.59%	18.91%	12.21%
Subtotal	6.59%	18.91%	12.21%
Grand Total*	100.00%	100.00%	100.00%

* The percentages may not total 100 percent due to rounding.



A distribution of available businesses by source also was calculated for each industry. As noted in Table 5.03, 76.2 percent of the construction companies identified were derived from DFW and the Consortium records and government certification lists. Companies identified through business outreach and the business association membership lists represent 23.8 percent of the willing businesses.

Table 5.03 Distribution of Prime Contractor Availability Data Sources, Construction

Sources	M/WBEs Percentage	Non-M/WBEs Percentage	Source Percentage
Utilized Prime Contractors	11.31%	36.18%	19.65%
Bidders Lists	20.11%	6.12%	15.42%
Government Certification Lists	55.45%	2.49%	37.70%
SBA Pro-Net	2.13%	6.04%	3.44%
Subtotal	88.99%	50.83%	76.20%
Willingness Survey	11.01%	49.17%	23.80%
Subtotal	11.01%	49.17%	23.80%
Grand Total*	100.00%	100.00%	100.00%

* The percentages may not total 100 percent due to rounding.



Table 5.04 depicts the data sources for available architecture and engineering prime contractors. As noted, 71.25 percent of the architecture and engineering companies identified were derived from DFW and the Consortium records and government certification lists. Companies identified through business outreach and the business association membership lists represent 28.75 percent of the willing businesses.

Table 5.04 Distribution of Prime Contractor Availability Data Sources, Architecture and Engineering

Sources	M/WBEs Percentage	Non-M/WBEs Percentage	Source Percentage
Utilized Prime Contractors	13.03%	26.97%	19.44%
Bidders Lists	26.67%	10.35%	19.17%
Government Certification Lists	48.76%	1.60%	27.08%
SBA Pro-Net	2.61%	9.04%	5.56%
Subtotal	91.07%	47.96%	71.25%
Willingness Survey	8.93%	52.04%	28.75%
Subtotal	8.93%	52.04%	28.75%
Grand Total*	100.00%	100.00%	100.00%

* The percentages may not total 100 percent due to rounding.



Table 5.05 depicts the data sources for available professional services prime contractors. As noted, 75.69 percent of the construction companies identified were derived from DFW and the Consortium records and government certification lists. Companies identified through business outreach and the business association membership lists represent 24.31 percent of the willing businesses.

Table 5.05 Distribution of Prime Contractor Availability Data Sources, Professional Services

Sources	M/WBEs Percentage	Non-M/WBEs Percentage	Source Percentage
Utilized Prime Contractors	7.96%	27.96%	15.55%
Bidders Lists	20.04%	8.19%	15.55%
Government Certification Lists	52.39%	1.89%	33.24%
SBA Pro-Net	6.88%	18.70%	11.36%
Subtotal	87.27%	56.73%	75.69%
Willingness Survey	12.73%	43.27%	24.31%
Subtotal	12.73%	43.27%	24.31%
Grand Total*	100.00%	100.00%	100.00%

* The percentages may not total 100 percent due to rounding.



Table 5.06 depicts the data sources for available non-professional services prime contractors. As noted, 97.84 percent of the non-professional services companies identified were derived from DFW and the Consortium records and government certification lists. Companies identified through business outreach and the business association membership lists represent 2.16 percent of the willing businesses.

Table 5.06 Distribution of Prime Contractor Availability Data Sources, Non-Professional Services

Sources	M/WBEs Percentage	Non-M/WBEs Percentage	Source Percentage
Utilized Prime Contractors	18.65%	84.10%	49.02%
Bidders Lists	17.80%	5.17%	11.94%
Government Certification Lists	58.41%	2.15%	32.30%
SBA Pro-Net	3.74%	5.54%	4.57%
Subtotal	98.60%	96.95%	97.84%
Willingness Survey	1.40%	3.05%	2.16%
Subtotal	1.40%	3.05%	2.16%
Grand Total*	100.00%	100.00%	100.00%

* The percentages may not total 100 percent due to rounding.



Table 5.07 depicts the data sources for available goods prime contractors. As noted, 99.08 percent of the goods prime contractors were obtained from DFW and the Consortium records and government certification lists. Companies identified through business outreach and the business association membership lists represent less than one percent of the willing businesses.

Table 5.07 Distribution of Prime Contractor Availability Data Sources, Goods

Sources	M/WBEs Percentage	Non-M/WBEs Percentage	Source Percentage
Utilized Prime Contractors	16.96%	67.40%	43.84%
Bidders Lists	21.30%	7.84%	14.13%
Government Certification Lists	51.54%	1.63%	24.95%
SBA Pro-Net	9.41%	22.09%	16.17%
Subtotal	99.21%	98.96%	99.08%
Willingness Survey	0.79%	1.04%	0.92%
Subtotal	0.79%	1.04%	0.92%
Grand Total*	100.00%	100.00%	100.00%

* The percentages may not total 100 percent due to rounding.



III. CAPACITY

The second component of the availability requirement set forth in *Croson* is a business's capacity or ability to work on the contracts awarded by the jurisdiction.³ However, capacity requirements are not delineated in *Croson*. In fact, a standard for capacity has only been addressed in a few subsequent cases. Each case where capacity has been considered, has involved large competitively bid construction prime contracts. Nevertheless, the capacity of willing market area businesses to do business with DFW was assessed using four approaches:

- The size of all prime contracts awarded by DFW was analyzed to determine the capacity needed to perform the average awarded contract
- The largest contracts awarded to M/WBEs were identified to determine demonstrated ability to win large, competitively bid contracts
- The certification process was assessed to determine if it meets the standard set in *Contractors Ass'n of Eastern Pennsylvania v. City of Philadelphia (Philadelphia)*,⁴ which found the USDOT certification to measure capacity.
- The disparity analysis was restricted to an examination of the prime contract awards valued under \$500,000 to limit the capacity required to perform the contracts subjected to the statistical analysis

A. Size of Contracts Analyzed

In *Associated General Contractors of America v. City of Columbus* and *Engineering Contractors Ass'n of South Florida v. Metropolitan Dade City*, the courts were concerned with the capacity analysis of available businesses to bid on large, competitively bid contracts. It should also be noted that the focus in both cases was on the bidding company's size and ability to perform on large, competitively bid construction contracts.⁵

DFW's construction, architecture and engineering, professional services, non-professional services, and goods contracts were analyzed to determine the size of awarded contracts and, therefore, the capacity required to perform on DFW's contracts. The size distribution

³ *Croson*, 488 U.S. 469.

⁴ *Contractors Ass'n of Eastern Pennsylvania v. City of Philadelphia*, 6 F.3d 990 (3d Cir. 1993), on remand, 893 F. Supp. 419 (E.D. Penn. 1995), aff'd, 91 F.3d 586 (3d Cir. 1996).

⁵ *Associated General Contractors of America v. City of Columbus*, 936 F. Supp. 1363 (S.D. Ohio 1996), and *Engineering Contractors Ass'n of South Florida v. Metropolitan Dade City*, 943 F. Supp. 1546 (S.D. Fla. 1996), aff'd 122 F.3d 895 (11th Cir. 1997).



illustrates the fact that the majority of DFW awarded contracts were under \$25,000. This distribution illustrates that limited capacity is needed to perform the overwhelming majority of DFW's contracts.

For this contract size analysis, DFW's contracts were grouped into eight dollar ranges⁶. Each award was analyzed to determine the number and percentage of contracts that fell within each of the eight size categories. The size distribution of contracts awarded to Caucasian Males, was then compared to the size distribution of contracts awarded to Caucasian Females, Minority Females, and Minority Males.

The analysis in Table 5.08, which combines all industries, demonstrates that 87.07 percent of DFW's contracts were less than \$25,000, 91.87 percent were less than \$100,000, and 95.94 percent were less than \$500,000. Only 4.06 percent of DFW's contracts were \$500,000 or more.

1. Construction Contracts by Size

Table 5.09 depicts DFW's construction contracts awarded within the eight dollar ranges. Contracts valued at less than \$25,000 were 14.41 percent; those less than \$50,000 were 16.95 percent; those less than \$100,000 were 25.42 percent; and those less than \$500,000 were 44.92 percent.

2. Architecture and Engineering Contracts by Size

Table 5.10 depicts architecture and engineering contracts within the eight dollar ranges. Contracts valued at less than \$25,000 were 29.27 percent; those less than \$50,000 were 39.02 percent; those less than \$100,000 were 43.9 percent; and those less than \$500,000 were 65.85 percent.

3. Professional Services Contracts by Size

Table 5.11 depicts professional services contracts within the eight dollar ranges. Contracts valued at less than \$25,000 were 59.77 percent; those less than \$50,000 were 68.97 percent; those less than \$100,000 were 76.44 percent; and those less than \$500,000 were 93.1 percent.



⁶ The eight dollar ranges are \$1 to \$24,999, \$25,000 to \$49,999, \$50,000 to \$99,999, \$100,000 to \$249,999, \$250,000 to \$499,999, \$500,000 to \$999,999, \$1,000,000 to \$2,999,999, and \$3,000,000 and greater.

4. Non-Professional Services Contracts by Size

Table 5.12 depicts non-professional services contracts within the eight dollar ranges. Contracts valued at less than \$25,000 were 58.78 percent; those less than \$50,000 were 72.79 percent; those less than \$100,000 were 77.55 percent; and those less than \$500,000 were 89.12 percent.

5. Goods Contracts by Size

Table 5.13 depicts goods contracts within the eight dollar ranges. Contracts valued at less than \$25,000 were 96.7 percent; those less than \$50,000 were 97.39 percent; those less than \$100,000 were 97.94 percent; and those less than \$500,000 were 99.31 percent.



Table 5.08 Contracts by Size: All Industries, October 1, 2002 to September 30, 2007

Size	Caucasian				Minority				Total	
	Females		Males		Females		Males			
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent
\$1 - \$24,999	522	87.73%	2,935	87.30%	281	89.49%	490	83.76%	4,228	87.07%
\$25,000 - \$49,999	22	3.70%	110	3.27%	9	2.87%	11	1.88%	152	3.13%
\$50,000 - \$99,999	10	1.68%	56	1.67%	8	2.55%	7	1.20%	81	1.67%
\$100,000 - \$249,999	12	2.02%	83	2.47%	5	1.59%	16	2.74%	116	2.39%
\$250,000 - \$499,999	7	1.18%	53	1.58%	4	1.27%	18	3.08%	82	1.69%
\$500,000 - \$999,999	10	1.68%	40	1.19%	3	0.96%	17	2.91%	70	1.44%
\$1,000,000 - \$2,999,999	10	1.68%	39	1.16%	0	0.00%	12	2.05%	61	1.26%
\$3,000,000 and greater	2	0.34%	46	1.37%	4	1.27%	14	2.39%	66	1.36%
Total	595	100.00%	3362	100.00%	314	100.00%	585	100.00%	4856	100.00%

P-Value > 0.05

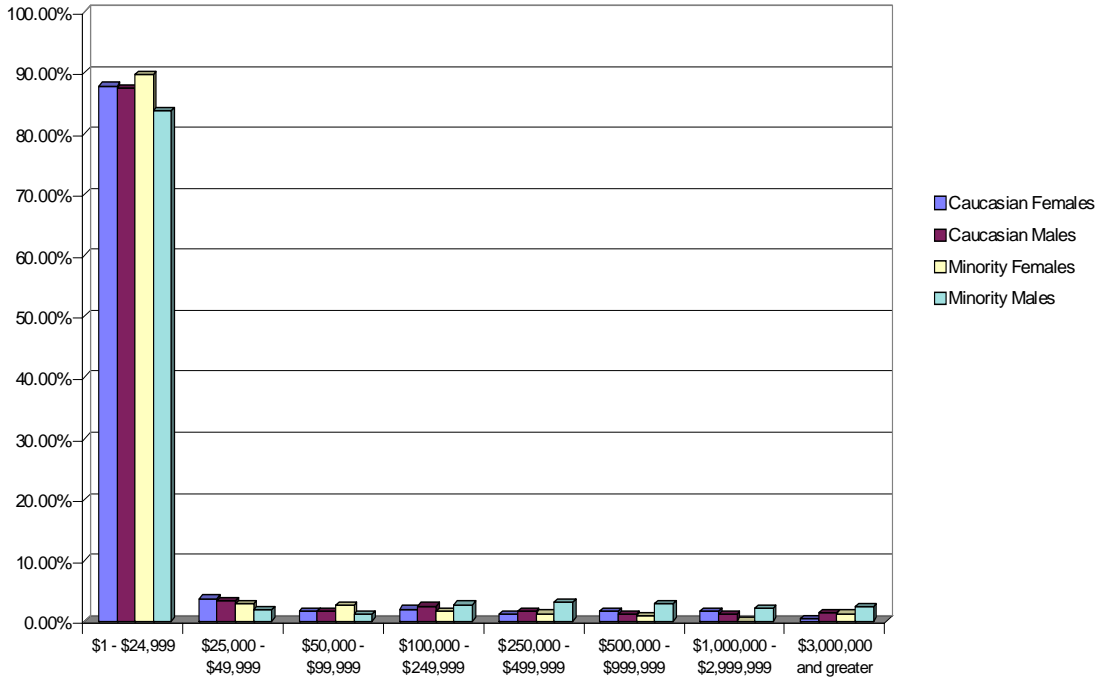
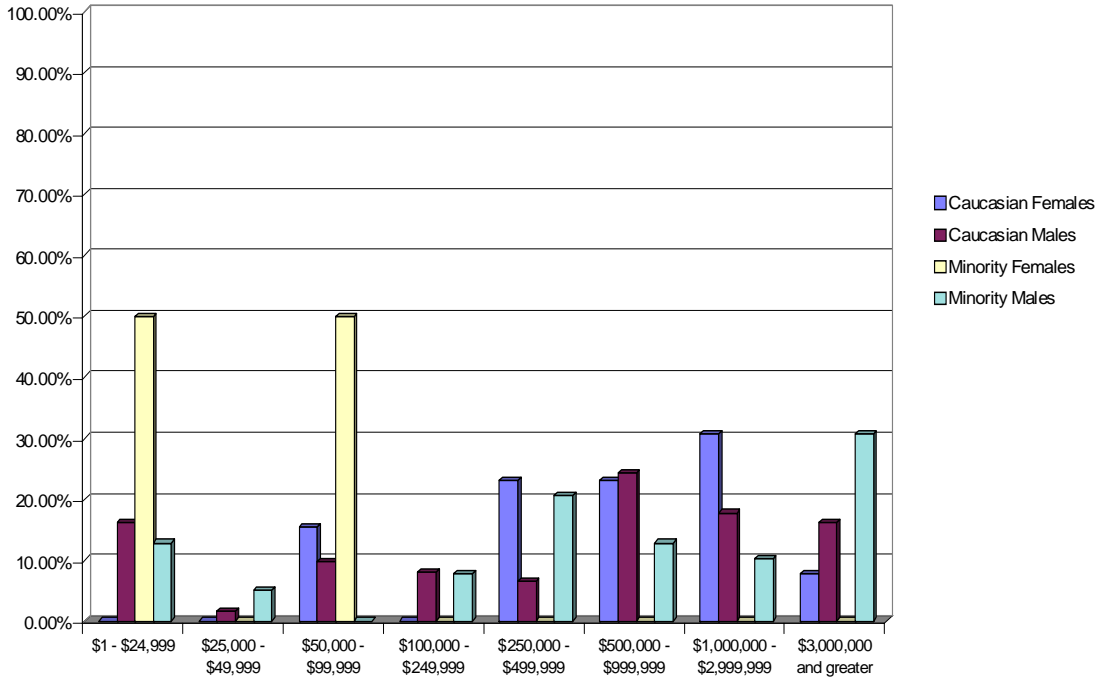


Table 5.09 Construction Contracts by Size: October 1, 2002 to September 30, 2007

Size	Caucasian				Minority				Total	
	Females		Males		Females		Males		Freq	Percent
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent		
\$1 - \$24,999	0	0.00%	10	16.13%	2	50.00%	5	12.82%	17	14.41%
\$25,000 - \$49,999	0	0.00%	1	1.61%	0	0.00%	2	5.13%	3	2.54%
\$50,000 - \$99,999	2	15.38%	6	9.68%	2	50.00%	0	0.00%	10	8.47%
\$100,000 - \$249,999	0	0.00%	5	8.06%	0	0.00%	3	7.69%	8	6.78%
\$250,000 - \$499,999	3	23.08%	4	6.45%	0	0.00%	8	20.51%	15	12.71%
\$500,000 - \$999,999	3	23.08%	15	24.19%	0	0.00%	5	12.82%	23	19.49%
\$1,000,000 - \$2,999,999	4	30.77%	11	17.74%	0	0.00%	4	10.26%	19	16.10%
\$3,000,000 and greater	1	7.69%	10	16.13%	0	0.00%	12	30.77%	23	19.49%
Total	13	100.00%	62	100.00%	4	100.00%	39	100.00%	118	100.00%

P-Value > 0.05



**Table 5.10 Architecture and Engineering Contracts by Size:
October 1, 2002 to September 30, 2007**

Size	Caucasian				Minority				Total	
	Females		Males		Females		Males			
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent
\$1 - \$24,999	1	14.29%	11	36.67%	0	0.00%	0	0.00%	12	29.27%
\$25,000 - \$49,999	2	28.57%	2	6.67%	0	0.00%	0	0.00%	4	9.76%
\$50,000 - \$99,999	0	0.00%	1	3.33%	0	0.00%	1	33.33%	2	4.88%
\$100,000 - \$249,999	1	14.29%	3	10.00%	0	0.00%	0	0.00%	4	9.76%
\$250,000 - \$499,999	0	0.00%	5	16.67%	0	0.00%	0	0.00%	5	12.20%
\$500,000 - \$999,999	0	0.00%	1	3.33%	0	0.00%	1	33.33%	2	4.88%
\$1,000,000 - \$2,999,999	3	42.86%	2	6.67%	0	0.00%	1	33.33%	6	14.63%
\$3,000,000 and greater	0	0.00%	5	16.67%	1	100.00%	0	0.00%	6	14.63%
Total	7	100.00%	30	100.00%	1	100.00%	3	100.00%	41	100.00%

Insufficient Data

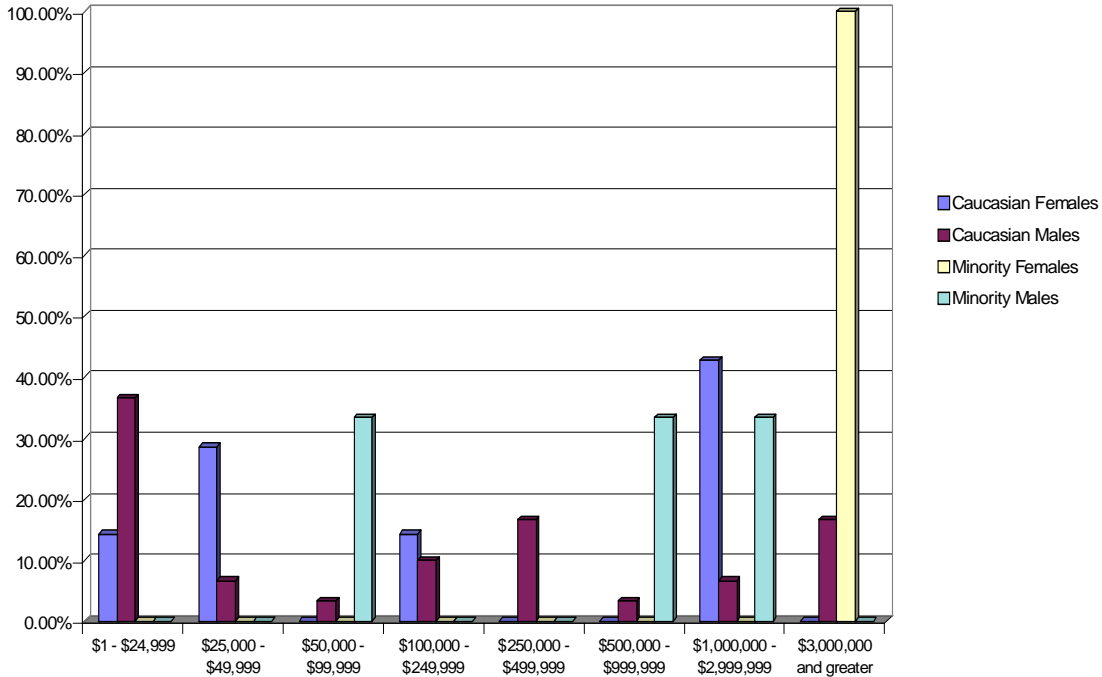
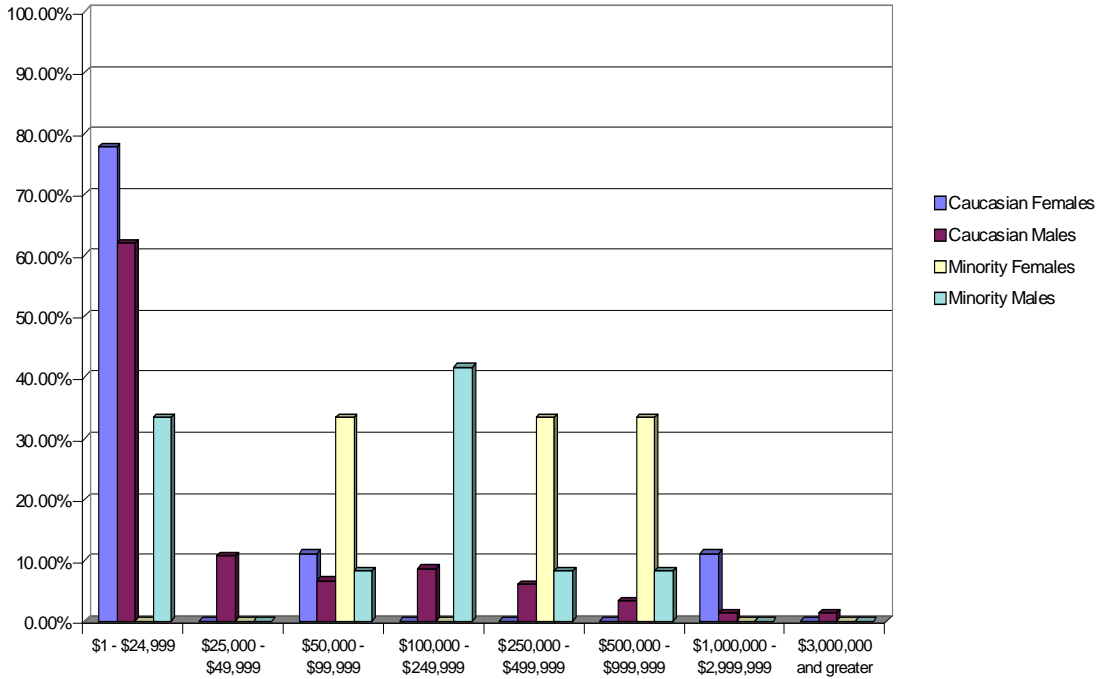


Table 5.11 Professional Services Contracts by Size: October 1, 2002 to September 30, 2007

Size	Caucasian				Minority				Total	
	Females		Males		Females		Males		Freq	Percent
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent		
\$1 - \$24,999	7	77.78%	93	62.00%	0	0.00%	4	33.33%	104	59.77%
\$25,000 - \$49,999	0	0.00%	16	10.67%	0	0.00%	0	0.00%	16	9.20%
\$50,000 - \$99,999	1	11.11%	10	6.67%	1	33.33%	1	8.33%	13	7.47%
\$100,000 - \$249,999	0	0.00%	13	8.67%	0	0.00%	5	41.67%	18	10.34%
\$250,000 - \$499,999	0	0.00%	9	6.00%	1	33.33%	1	8.33%	11	6.32%
\$500,000 - \$999,999	0	0.00%	5	3.33%	1	33.33%	1	8.33%	7	4.02%
\$1,000,000 - \$2,999,999	1	11.11%	2	1.33%	0	0.00%	0	0.00%	3	1.72%
\$3,000,000 and greater	0	0.00%	2	1.33%	0	0.00%	0	0.00%	2	1.15%
Total	9	100.00%	150	100.00%	3	100.00%	12	100.00%	174	100.00%

Insufficient Data



**Table 5.12 Non-Professional Services Contracts by Size:
October 1, 2002 to September 30, 2007**

Size	Caucasian				Minority				Total	
	Females		Males		Females		Males		Freq	Percent
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent		
\$1 - \$24,999	32	47.06%	376	64.83%	5	20.83%	19	30.16%	432	58.78%
\$25,000 - \$49,999	17	25.00%	69	11.90%	8	33.33%	9	14.29%	103	14.01%
\$50,000 - \$99,999	3	4.41%	25	4.31%	3	12.50%	4	6.35%	35	4.76%
\$100,000 - \$249,999	8	11.76%	40	6.90%	2	8.33%	5	7.94%	55	7.48%
\$250,000 - \$499,999	3	4.41%	18	3.10%	2	8.33%	7	11.11%	30	4.08%
\$500,000 - \$999,999	4	5.88%	12	2.07%	1	4.17%	10	15.87%	27	3.67%
\$1,000,000 - \$2,999,999	0	0.00%	15	2.59%	0	0.00%	7	11.11%	22	2.99%
\$3,000,000 and greater	1	1.47%	25	4.31%	3	12.50%	2	3.17%	31	4.22%
Total	68	100.00%	580	100.00%	24	100.00%	63	100.00%	735	100.00%

P-Value < 0.001

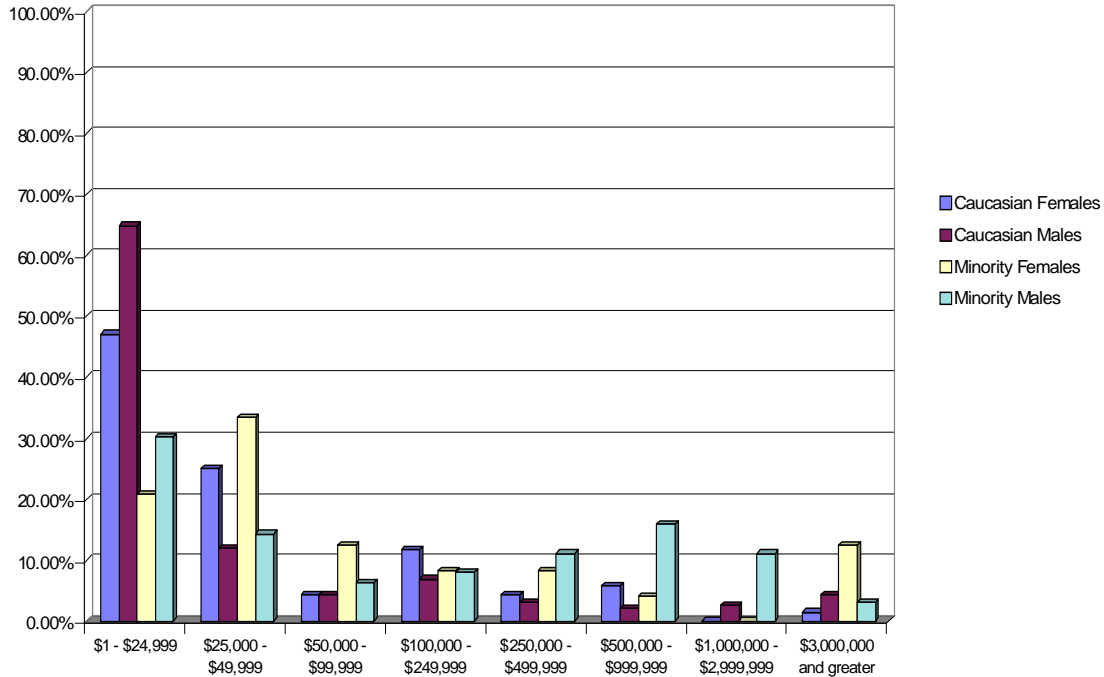
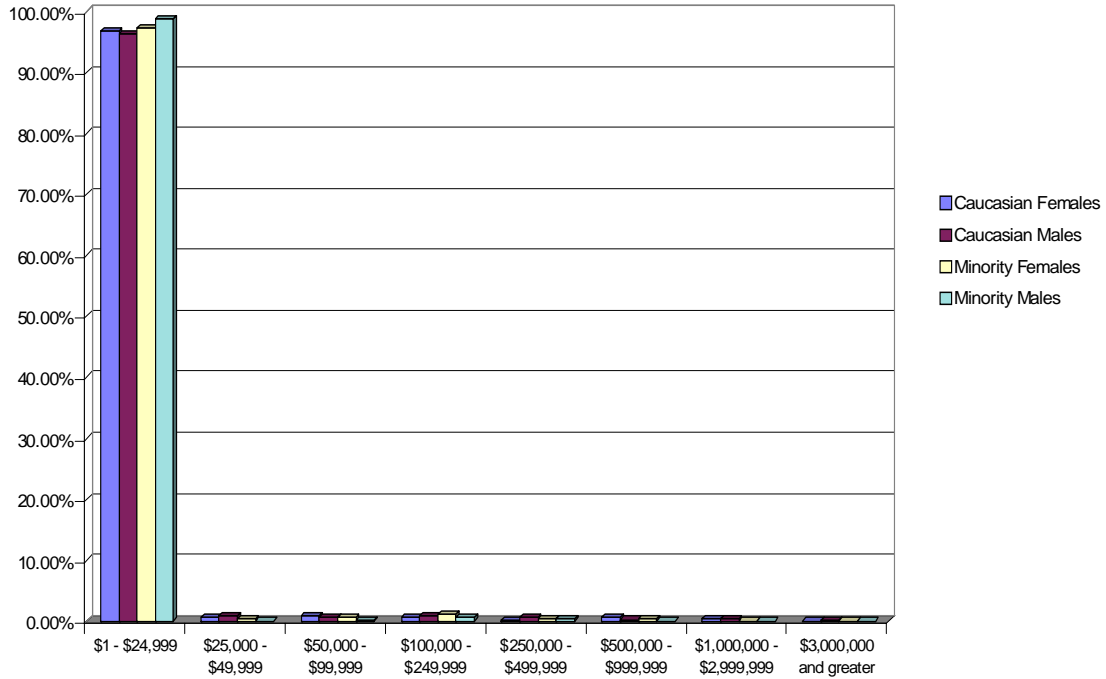


Table 5.13 Goods Contracts by Size: October 1, 2002 to September 30, 2007

Size	Caucasian				Minority				Total	
	Females		Males		Females		Males			
	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent	Freq	Percent
\$1 - \$24,999	482	96.79%	2,445	96.26%	274	97.16%	462	98.72%	3,663	96.70%
\$25,000 - \$49,999	3	0.60%	22	0.87%	1	0.35%	0	0.00%	26	0.69%
\$50,000 - \$99,999	4	0.80%	14	0.55%	2	0.71%	1	0.21%	21	0.55%
\$100,000 - \$249,999	3	0.60%	22	0.87%	3	1.06%	3	0.64%	31	0.82%
\$250,000 - \$499,999	1	0.20%	17	0.67%	1	0.35%	2	0.43%	21	0.55%
\$500,000 - \$999,999	3	0.60%	7	0.28%	1	0.35%	0	0.00%	11	0.29%
\$1,000,000 - \$2,999,999	2	0.40%	9	0.35%	0	0.00%	0	0.00%	11	0.29%
\$3,000,000 and greater	0	0.00%	4	0.16%	0	0.00%	0	0.00%	4	0.11%
Total	498	100.00%	2540	100.00%	282	100.00%	468	100.00%	3788	100.00%

P-Value > 0.05



B. Largest M/WBE Contract Awards by The Consortium, by Industry

M/WBEs were awarded large contracts in each industry. The distribution of the largest M/WBE contracts DFW awarded is depicted below in Table 5.14. In each industry, M/WBEs were awarded very large, competitively bid contracts. The utilization analysis shows that M/WBEs demonstrated the capacity to successfully compete for contracts as large as \$12 million in construction, \$10.8 million in architecture and engineering, \$1 million in professional services, \$14.1 million in non-professional services, and \$1.7 million in goods.

Table 5.14 Largest M/WBE Contract Awards by DFW Airport Board

Largest Contract Value					
Ethnic / Gender Group	Construction	Architecture and Engineering	Professional Services	Non-Professional Services	Goods
MBEs	\$12,000,000	\$10,756,159	\$533,000	\$14,063,193	\$518,944
WBEs	\$12,000,000	\$2,500,000	\$1,000,000	\$4,523,467	\$1,690,577

M/WBEs also demonstrated the capacity to successfully compete for contracts awarded by the Consortium. The City of Arlington’s utilization analysis shows in Table 5.15 below that M/WBEs demonstrated the capacity to successfully compete for contracts as large as \$1.9 million in construction, \$1.2 million in architecture and engineering, \$500,000 in professional services, and \$1.9 million in non-professional services.

Table 5.15 Largest M/WBE Contract Awards by The City of Arlington

Largest Contract Value				
Ethnic / Gender Group	Construction	Architecture and Engineering	Professional Services	Non-Professional Services
MBEs	\$339,330	\$1,295,933	\$500,000	\$376,490
WBEs	\$1,990,682	\$494,000	\$339	\$1,996,475



The Fort Worth Independent School District's utilization analysis shows in Table 5.16 below that M/WBEs demonstrated the capacity to successfully compete for contracts as large as \$13.4 million in construction, \$453,000 in architecture and engineering, \$34,000 in professional services, \$654,000 in non-professional services, and \$742,000 in goods.

Table 5.16 Largest M/WBE Contract Awards by Fort Worth Independent School District

Largest Contract Value					
Ethnic / Gender Group	Construction	Architecture and Engineering	Professional Services	Non-Professional Services	Goods
MBEs	\$13,420,819	\$453,067	\$32,844	\$654,267	\$228,950
WBEs	\$2,576,447	\$41,758	\$34,244	\$474,150	\$742,694

Fort Worth Transportation Authority's utilization analysis shows in Table 5.17 below that M/WBEs demonstrated the capacity to successfully compete for contracts as large as \$24,000 in construction, \$4,000 in architecture and engineering, \$98,000 in professional services, \$500,000 in non-professional services, and \$72,000 in goods.

Table 5.17 Largest M/WBE Contract Awards by Fort Worth Transportation Authority

Largest Contract Value					
Ethnic / Gender Group	Construction	Architecture and Engineering	Professional Services	Non-Professional Services	Goods
MBEs	\$9,880	\$4,391	\$46,100	\$500,000	\$8,910
WBEs	\$24,949	\$0	\$98,232	\$195,968	\$72,242



The City of Fort Worth’s utilization analysis shows in Table 5.18 below that M/WBEs demonstrated the capacity to successfully compete for contracts as large as \$5.1 million in construction, \$582,000 in architecture and engineering, \$300,000 in professional services, \$1.3 million in non-professional services, and \$1 million in goods.

Table 5.18 Largest M/WBE Contract Awards by The City of Fort Worth

Ethnic / Gender Group	Largest Contract Value				
	Construction	Architecture and Engineering	Professional Services	Non-Professional Services	Goods
MBEs	\$5,109,844	\$582,429	\$300,000	\$1,346,043	\$1,040,680
WBEs	\$2,078,644	\$277,193	\$272,998	\$553,793	\$466,500

The North Texas Tollway Authority’s utilization analysis shows in Table 5.19 below that M/WBEs demonstrated the capacity to successfully compete for contracts as large as \$5.1 million in construction, \$1.9 million in architecture and engineering, \$110,000 in professional services, \$125,000 in non-professional services, and \$129,000 in goods.

Table 5.19 Largest M/WBE Contract Awards by North Texas Tollway Authority

Ethnic / Gender Group	Largest Contract Value				
	Construction	Architecture and Engineering	Professional Services	Non-Professional Services	Goods
MBEs	\$483,842	\$1,855,312	\$110,150	\$32,812	\$118,203
WBEs	\$5,094,978	\$1,487,526	\$37,750	\$125,225	\$129,180



C. DFW Board and The Consortium Certification Standards

The Court has addressed the merits of certification as a measure of capacity.⁷ *Philadelphia*, an appellate court decision, found that a certification program which was based on USDOT standards satisfied the determination of a business's capability. Thus, a certification program like NCTRCA which adheres to the standards set forth in the USDOT regulations, 49 Code of Federal Regulations Part 26, is documentation of M/WBE capacity.

IV. PRIME CONTRACTOR AVAILABILITY ANALYSIS

The size of DFW's contracts demonstrates that the majority of the contracts are small requiring limited capacity to perform. Furthermore, the awards DFW has made to M/WBE businesses demonstrate that the capacity of the available businesses is considerably greater than needed to bid on the majority of the contracts awarded in the five industries studied.

The prime contractor availability findings for the Dallas and Tarrant counties market area, are summarized below:



⁷ *Contractors Ass'n of Eastern Pennsylvania v. City of Philadelphia*, 6 F.3d 990 (3d Cir. 1993), on remand, 893 F. Supp. 419 (E.D. Penn. 1995), affd, 91 F.3d 586 (3d Cir. 1996).

A. Construction Prime Contractor Availability

The distribution of available construction prime contractors is summarized in Table 5.20 below. These ethnic and gender groups are defined in Table 2.01 of *Chapter 2: Prime Contractor Utilization Analysis*.

African Americans account for 21.7 percent of the construction businesses in DFW's market area.

Asian Americans account for 3.62 percent of the construction businesses in DFW's market area.

Hispanic Americans account for 19.9 percent of the construction businesses in DFW's market area.

Native Americans account for 2.3 percent of the construction businesses in DFW's market area.

Minority Business Enterprises account for 47.52 percent of the construction businesses in DFW's market area.

Women Business Enterprises account for 18.96 percent of the construction businesses in DFW's market area.

Minority and Women Business Enterprises account for 66.48 percent of the construction businesses in DFW's market area.

Caucasian Male Business Enterprises account for 33.52 percent of the construction businesses in DFW's market area.



Table 5.20 Available Construction Prime Contractors

Ethnicity[^]	Percent of Businesses
African Americans	21.70%
Asian Americans	3.62%
Hispanic Americans	19.90%
Native Americans	2.30%
Caucasian Females	18.96%
Caucasian Males	33.52%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	4.43%
African American Males	17.27%
Asian American Females	0.84%
Asian American Males	2.78%
Hispanic American Females	3.57%
Hispanic American Males	16.33%
Native American Females	0.78%
Native American Males	1.52%
Caucasian Females	18.96%
Caucasian Males	33.52%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	9.62%
Minority Males	37.90%
Caucasian Females	18.96%
Caucasian Males	33.52%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	47.52%
Women Business Enterprises	18.96%
Minority and Women Business Enterprises	66.48%
Caucasian Male Business Enterprises	33.52%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



B. Architecture and Engineering Services Prime Contractor Availability

The distribution of available architecture and engineering prime contractors is summarized in Table 5.21 below:

African Americans account for 14.28 percent of the architecture and engineering businesses in DFW's market area.

Asian Americans account for 8.18 percent of the architecture and engineering businesses in DFW's market area.

Hispanic Americans account for 11.86 percent of the architecture and engineering businesses in DFW's market area.

Native Americans account for 1.41 percent of the architecture and engineering businesses in DFW's market area.

Minority Business Enterprises account for 35.72 percent of the architecture and engineering businesses in DFW's market area.

Women Business Enterprises account for 18.3 percent of the architecture and engineering businesses in DFW's market area.

Minority and Women Business Enterprises account for 54.02 percent of the architecture and engineering businesses in DFW's market area.

Caucasian Male Business Enterprises account for 45.98 percent of the architecture and engineering businesses in DFW's market area.



Table 5.21 Available Architecture and Engineering Prime Contractors

Ethnicity[^]	Percent of Businesses
African Americans	14.28%
Asian Americans	8.18%
Hispanic Americans	11.86%
Native Americans	1.41%
Caucasian Females	18.30%
Caucasian Males	45.98%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	2.82%
African American Males	11.46%
Asian American Females	1.61%
Asian American Males	6.57%
Hispanic American Females	2.28%
Hispanic American Males	9.58%
Native American Females	0.40%
Native American Males	1.01%
Caucasian Females	18.30%
Caucasian Males	45.98%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	7.10%
Minority Males	28.62%
Caucasian Females	18.30%
Caucasian Males	45.98%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	35.72%
Women Business Enterprises	18.30%
Minority and Women Business Enterprises	54.02%
Caucasian Male Business Enterprises	45.98%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



C. Professional Services Prime Contractor Availability

The distribution of available professional services prime contractors is summarized in Table 5.22 below:

African Americans account for 20.59 percent of the professional services businesses in DFW's market area.

Asian Americans account for 6.31 percent of the professional services businesses in DFW's market area.

Hispanic Americans account for 8.87 percent of the professional services businesses in DFW's market area.

Native Americans account for 1.02 percent of the professional services businesses in DFW's market area.

Minority Business Enterprises account for 36.79 percent of the professional services businesses in DFW's market area.

Women Business Enterprises account for 25.29 percent of the professional services businesses in DFW's market area.

Minority and Women Business Enterprises account for 62.08 percent of the professional services businesses in DFW's market area.

Caucasian Male Business Enterprises account for 37.92 percent of the professional services businesses in DFW's market area.



Table 5.22 Available Professional Services Prime Contractors

Ethnicity[^]	Percent of Businesses
African Americans	20.59%
Asian Americans	6.31%
Hispanic Americans	8.87%
Native Americans	1.02%
Caucasian Females	25.29%
Caucasian Males	37.92%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	9.38%
African American Males	11.22%
Asian American Females	2.02%
Asian American Males	4.29%
Hispanic American Females	3.06%
Hispanic American Males	5.80%
Native American Females	0.41%
Native American Males	0.61%
Caucasian Females	25.29%
Caucasian Males	37.92%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	14.87%
Minority Males	21.92%
Caucasian Females	25.29%
Caucasian Males	37.92%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	36.79%
Women Business Enterprises	25.29%
Minority and Women Business Enterprises	62.08%
Caucasian Male Business Enterprises	37.92%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



D. Non-Professional Services Prime Contractor Availability

The distribution of available non-professional services prime contractors is summarized in Table 5.23 below:

African Americans account for 19.71 percent of the non-professional services businesses in DFW's market area.

Asian Americans account for 3.31 percent of the non-professional services businesses in DFW's market area.

Hispanic Americans account for 9.57 percent of the non-professional services businesses in DFW's market area.

Native Americans account for 0.87 percent of the non-professional services businesses in DFW's market area.

Minority Business Enterprises account for 33.46 percent of the non-professional services businesses in DFW's market area.

Women Business Enterprises account for 20.14 percent of the non-professional services businesses in DFW's market area.

Minority and Women Business Enterprises account for 53.6 percent of the non-professional services businesses in DFW's market area.

Caucasian Male Business Enterprises account for 46.4 percent of the non-professional services businesses in DFW's market area.



Table 5.23 Available Non-Professional Services Prime Contractors

Ethnicity[^]	Percent of Businesses
African Americans	19.71%
Asian Americans	3.31%
Hispanic Americans	9.57%
Native Americans	0.87%
Caucasian Females	20.14%
Caucasian Males	46.40%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	6.85%
African American Males	12.86%
Asian American Females	1.07%
Asian American Males	2.24%
Hispanic American Females	2.93%
Hispanic American Males	6.64%
Native American Females	0.39%
Native American Males	0.48%
Caucasian Females	20.14%
Caucasian Males	46.40%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	11.24%
Minority Males	22.22%
Caucasian Females	20.14%
Caucasian Males	46.40%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	33.46%
Women Business Enterprises	20.14%
Minority and Women Business Enterprises	53.60%
Caucasian Male Business Enterprises	46.40%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



E. Goods Prime Contractor Availability

The distribution of available goods prime contractors is summarized in Table 5.24.

African Americans account for 13.09 percent of the goods businesses in DFW's market area.

Asian Americans account for 4.4 percent of the goods businesses in DFW's market area.

Hispanic Americans account for 7.47 percent of the goods businesses in DFW's market area.

Native American Businesses account for 1.61 percent of the goods other businesses in DFW's market area.

Minority Business Enterprises account for 26.57 percent of the goods businesses in DFW's market area.

Women Business Enterprises account for 20.15 percent of the goods businesses in DFW's market area.

Minority and Women Business Enterprises account for 46.71 percent of the goods businesses in DFW's market area.

Caucasian Male Business Enterprises account for 53.29 percent of the goods businesses in DFW's market area.



Table 5.24 Available Goods Prime Contractors

Ethnicity[^]	Percent of Businesses
African Americans	13.09%
Asian Americans	4.40%
Hispanic Americans	7.47%
Native Americans	1.61%
Caucasian Females	20.15%
Caucasian Males	53.29%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	4.83%
African American Males	8.26%
Asian American Females	1.40%
Asian American Males	2.99%
Hispanic American Females	2.36%
Hispanic American Males	5.12%
Native American Females	0.60%
Native American Males	1.00%
Caucasian Females	20.15%
Caucasian Males	53.29%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	9.20%
Minority Males	17.37%
Caucasian Females	20.15%
Caucasian Males	53.29%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	26.57%
Women Business Enterprises	20.15%
Minority and Women Business Enterprises	46.71%
Caucasian Male Business Enterprises	53.29%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



V. SUBCONTRACTOR AVAILABILITY ANALYSIS

A. Sources of Potentially Willing and Able Subcontractors and Availability

All available prime contractors were included in the calculation of subcontractor availability. Additional subcontractors in DFW's market area were identified using sources in Table 5.25.

Table 5.25 Unique Subcontractor Availability Data Sources

Type Record	Type Information
<ul style="list-style-type: none">• Subcontracting records provided by DFW and the Consortium	<ul style="list-style-type: none">• M/WBEs and non-M/WBEs
<ul style="list-style-type: none">• Prime contractor survey which identified subcontractors utilized by DFW and the Consortium	<ul style="list-style-type: none">• M/WBEs and non-M/WBEs

B. Determination of Willingness and Capacity

Subcontractor availability was limited to businesses determined to be willing and able to perform as prime contractors and businesses utilized as subcontractors; therefore, the determination of willingness was achieved. *Croson* does not require a measure of subcontractor capacity; therefore, it is not necessary to address capacity issues in the context of subcontractors.



C. Construction Subcontractor Availability

The distribution of available construction subcontractors is summarized in Table 5.26.

African Americans account for 18.08 percent of the construction firms in DFW's market area.

Asian Americans account for 3.14 percent of the construction firms in DFW's market area.

Hispanic Americans account for 17.31 percent of the construction firms in DFW's market area.

Native Americans account for 2 percent of the construction firms in DFW's market area.

Minority Business Enterprises account for 40.52 percent of the construction firms in DFW's market area.

Women Business Enterprises account for 18 percent of the construction firms in DFW's market area.

Minority and Women Business Enterprises account for 58.52 percent of the construction firms in DFW's market area.

Caucasian Male Business Enterprises account for 41.48 percent of the construction firms in DFW's market area.



Table 5.26 Available Construction Subcontractors

Ethnicity[^]	Percent of Businesses
African Americans	18.08%
Asian Americans	3.14%
Hispanic Americans	17.31%
Native Americans	2.00%
Caucasian Females	18.00%
Caucasian Males	41.48%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	3.79%
African American Males	14.29%
Asian American Females	0.73%
Asian American Males	2.40%
Hispanic American Females	3.34%
Hispanic American Males	13.97%
Native American Females	0.63%
Native American Males	1.36%
Caucasian Females	18.00%
Caucasian Males	41.48%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	8.49%
Minority Males	32.03%
Caucasian Females	18.00%
Caucasian Males	41.48%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	40.52%
Women Business Enterprises	18.00%
Minority and Women Business Enterprises	58.52%
Caucasian Male Business Enterprises	41.48%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



D. Architecture and Engineering Subcontractor Availability

The distribution of available architecture and engineering subcontractors is summarized in Table 5.27.

African Americans account for 13.48 percent of the architecture and engineering firms in DFW's market area.

Asian Americans account for 7.69 percent of the architecture and engineering firms in DFW's market area.

Hispanic Americans account for 11.39 percent of the architecture and engineering firms in DFW's market area.

Native Americans account for 1.33 percent of the architecture and engineering firms in DFW's market area.

Minority Business Enterprises account for 33.89 percent of the architecture and engineering firms in DFW's market area.

Women Business Enterprises account for 19.72 percent of the architecture and engineering in DFW's market area.

Minority and Women Business Enterprises account for 53.61 percent of the architecture and engineering firms in DFW's market area.

Caucasian Male Business Enterprises account for 46.39 percent of the architecture and engineering firms in DFW's market area.



Table 5.27 Available Architecture and Engineering Subcontractors

Ethnicity[^]	Percent of Businesses
African Americans	13.48%
Asian Americans	7.69%
Hispanic Americans	11.39%
Native Americans	1.33%
Caucasian Females	19.72%
Caucasian Males	46.39%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	2.66%
African American Males	10.82%
Asian American Females	1.74%
Asian American Males	5.96%
Hispanic American Females	2.20%
Hispanic American Males	9.20%
Native American Females	0.46%
Native American Males	0.87%
Caucasian Females	19.72%
Caucasian Males	46.39%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	7.06%
Minority Males	26.84%
Caucasian Females	19.72%
Caucasian Males	46.39%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	33.89%
Women Business Enterprises	19.72%
Minority and Women Business Enterprises	53.61%
Caucasian Male Business Enterprises	46.39%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



E. Professional Services Subcontractor Availability

The distribution of available professional services subcontractors is summarized in Table 5.28.

African Americans account for 20.41 percent of the professional services firms in DFW's market area.

Asian Americans account for 6.38 percent of the professional services firms in DFW's market area.

Hispanic Americans account for 9.09 percent of the professional services firms in DFW's market area.

Native Americans account for 1.04 percent of the professional services firms in DFW's market area.

Minority Business Enterprises account for 36.92 percent of the professional services firms in DFW's market area.

Women Business Enterprises account for 25.58 percent of the professional services in DFW's market area.

Minority and Women Business Enterprises account for 62.5 percent of the professional services firms in DFW's market area.

Caucasian Male Business Enterprises account for 37.5 percent of the professional services firms in DFW's market area.



Table 5.28 Available Professional Services Subcontractors

Ethnicity[^]	Percent of Businesses
African Americans	20.41%
Asian Americans	6.38%
Hispanic Americans	9.09%
Native Americans	1.04%
Caucasian Females	25.58%
Caucasian Males	37.50%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	9.25%
African American Males	11.16%
Asian American Females	1.99%
Asian American Males	4.39%
Hispanic American Females	3.07%
Hispanic American Males	6.02%
Native American Females	0.40%
Native American Males	0.64%
Caucasian Females	25.58%
Caucasian Males	37.50%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	14.71%
Minority Males	22.21%
Caucasian Females	25.58%
Caucasian Males	37.50%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	36.92%
Women Business Enterprises	25.58%
Minority and Women Business Enterprises	62.50%
Caucasian Male Business Enterprises	37.50%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group



F. Non-Professional Services Subcontractor Availability

The distribution of available non-professional services subcontractors is summarized in Table 5.29.

African Americans account for 18.92 percent of the non-professional services firms in DFW's market area.

Asian Americans account for 3.93 percent of the non-professional services firms in DFW's market area.

Hispanic Americans account for 11.14 percent of the non-professional services firms in DFW's market area.

Native Americans account for 1.24 percent of the non-professional services firms in DFW's market area.

Minority Business Enterprises account for 35.23 percent of the non-professional services firms in DFW's market area.

Women Business Enterprises account for 20.12 percent of the non-professional services in DFW's market area.

Minority and Women Business Enterprises account for 55.35 percent of the non-professional services firms in DFW's market area.

Caucasian Male Business Enterprises account for 44.65 percent of the non-professional services firms in DFW's market area.



Table 5.29 Available Non-Professional Services Subcontractors

Ethnicity[^]	Percent of Businesses
African Americans	18.92%
Asian Americans	3.93%
Hispanic Americans	11.14%
Native Americans	1.24%
Caucasian Females	20.12%
Caucasian Males	44.65%
TOTAL	100.00%
Ethnicity and Gender	Percent of Businesses
African American Females	6.32%
African American Males	12.60%
Asian American Females	1.13%
Asian American Males	2.80%
Hispanic American Females	2.87%
Hispanic American Males	8.27%
Native American Females	0.46%
Native American Males	0.78%
Caucasian Females	20.12%
Caucasian Males	44.65%
TOTAL	100.00%
Minority and Gender	Percent of Businesses
Minority Females	10.78%
Minority Males	24.45%
Caucasian Females	20.12%
Caucasian Males	44.65%
TOTAL	100.00%
Minority and Females	Percent of Businesses
Minority Business Enterprises	35.23%
Women Business Enterprises	20.12%
Minority and Women Business Enterprises	55.35%
Caucasian Male Business Enterprises	44.65%
TOTAL	100.00%

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group





6

PRIME CONTRACTOR DISPARITY ANALYSIS

I. INTRODUCTION

The objective of the disparity analysis is to determine the level minority and woman-owned business enterprises (M/WBEs) were utilized on the Dallas/Fort Worth International Airport Board's (DFW) contracts. Minority business enterprises are analyzed according to ethnic group. Under a fair and equitable system of awarding contracts, the proportion of contract dollars awarded to M/WBEs would be approximate to the proportion of available M/WBEs¹ in the relevant market area. A statistical test is conducted to determine if the available M/WBE businesses are underutilized due to random chance or something else.² According to *Croson*, if the statistical test is significant, then prima facie an inference of discrimination can be made.

The first step in conducting a statistical test of disparity is to calculate the contract value that each ethnic and gender group is expected to receive, based on each group's availability in the market area. This value shall be referred to as the **expected contract amount**. The next step is to compute the difference between the expected contract amount of each ethnic and gender group and the **actual contract amount** received by each group.

A disparity ratio of less than 0.80 indicates a relevant degree of disparity. This disparity may be detected using a parametric analysis,³ where the number of contracts is sufficiently large and the variation of the contract amount is not too large. When the standard deviation in the contract dollar amounts is high, which generally is the result of a few very large

¹ Availability is defined as the number of willing and able firms. The methodology for determining willing and able firms is detailed in *Chapter 5: Availability Analysis*.

² The study does not test statistically the overutilization of M/WBEs or the utilization of Caucasian Males.

³ Parametric analysis is a statistical examination based on the actual values of the variable. In this case, the parametric analysis consists of the actual dollar values of the contracts.



contracts, a disparity may not be detectable. Under the condition when the variation in contract dollar amounts is high, a non-parametric analysis⁴ would be employed to analyze the contracts ranked by dollar amount. Using the non-parametric analysis lowers the variance, because it reduces the effect of the outliers in the analysis.

In order to assess whether the difference in contract values is attributable to chance, a P-value⁵ is calculated. The P-value takes into account the number of contracts, amount of contract dollars, and variation in contract dollars. If the difference between the actual and expected number of contracts and total contract dollars has a P-value of less than 0.05, the difference is statistically significant.⁶

There are two critical constraints in performing statistical tests of significance. First, the size of the population affects the power of the statistical results. In other words, a relatively small population size, whether in terms of the total number of contracts or the total number of available businesses, decreases the power of the statistical results. Second, although an inference of discrimination cannot be made if statistical significance is not obtained from the test, one cannot infer from the results that there was no discrimination. Thus, the results of the statistical disparity analysis are necessarily influenced by the size of the population in each industry and ethnic and gender category. Where the results are not statistically significant, the existence of discrimination *cannot* be ruled out. Given these limitations, the anecdotal data has an especially important role in explaining the conditions of discrimination that might exist in the market area.

The analysis of the value of contract dollars for each ethnic and gender group incorporates the number of contracts awarded. Hence, the disparity analysis for the value of contract dollars awarded reflects an analysis of both the number of contracts awarded and the value of the contract dollars received by each ethnic and gender group.

It is important to note that the findings of statistical significance may be counterintuitive. It is not infrequent that the same disparity ratio, or the same difference between the utilization percentage and the availability percentage, is statistically significant in one industry and not statistically significant in another.

The test of statistical significance determines whether the difference between the actual dollars and the expected dollars exceeds two standard deviations. However, the standard deviation is calculated separately by industry for each ethnic and gender group. For each industry studied the calculation of the standard deviation is based on the total number of

⁴ Non-parametric analysis is a method to make data more suitable for statistical testing by allowing one variable to be replaced with a new variable that maintains the essential characteristics of the original one. In this case, the contracts are ranked from the smallest to the largest. The dollar value of each contract is replaced with its rank order number.

⁵ P-value is a measure of statistical significance.

⁶ The study does not test statistically the overutilization of M/WBEs or the utilization of Caucasian Males.



contracts and dollars analyzed in the Study and each ethnic and gender groups, respective percentage of availability. Therefore, the findings of statistical significance are influenced by the percentage of availability for each ethnic and gender group in the industry. In effect across the industries, similar utilization patterns with different availability patterns could yield different findings of statistical significance.

II. DISPARITY ANALYSIS

A disparity analysis was performed on construction, architecture and engineering, professional services, non-professional services, and goods contracts issued between October 1, 2002 and September 30, 2007.

As demonstrated in *Chapter 5: Availability Analysis*, the majority of DFW's contracts were small with 87.07 percent under \$25,000 and 91.87 percent under \$100,000. The fact that the majority of DFW's contracts were small suggests that the capacity needed to perform most of the contracts analyzed during the study period was minimal. There is also evidence that a notable number of willing firms had the capacity to perform contracts in excess of \$500,000. Therefore, a threshold of \$500,000 was set for the prime contractor disparity analysis to ensure that there were willing firms with the capacity to perform contracts included in the analysis. The prime contractor disparity findings in the five industries under consideration are summarized below.



A. Disparity Analysis: All Contracts under \$500,000, by Industry

1. Construction Contracts under \$500,000

The disparity analysis of all construction contracts under \$500,000 is depicted in Table 6.01 and Chart 6.01. These ethnic and gender groups are defined in Table 2.01 of *Chapter 2: Prime Contractor Utilization Analysis*.

African American Businesses represent 21.7 percent of the available construction firms and received 8.29 percent of the dollars for construction contracts under \$500,000. This underutilization is statistically significant.

Asian American Businesses represent 3.62 percent of the available construction firms and received none of the construction contracts under \$500,000. This underutilization is not statistically significant.

Hispanic American Businesses represent 19.9 percent of the available construction firms and received 32.4 percent of the dollars for construction contracts under \$500,000. This study does not test statistically the overutilization of minority groups.

Native American Businesses represent 2.3 percent of the available construction firms and received 6.91 percent of the dollars for construction contracts under \$500,000. This study does not test statistically the overutilization of minority groups.

Minority Business Enterprises represent 47.52 percent of the available construction firms and received 47.6 percent of the dollars for construction contracts under \$500,000. This study does not test statistically the overutilization of minority groups.

Women Business Enterprises represent 18.96 percent of the available construction firms and received 14.91 percent of the dollars for construction contracts under \$500,000. This underutilization is not statistically significant.

Minority and Women Business Enterprises represent 66.48 percent of available construction firms and received 62.51 percent of the dollars for construction contracts under \$500,000. This underutilization is not statistically significant.

Caucasian Male Business Enterprises represent 33.52 percent of the available construction firms and received 37.49 percent of the dollars for construction contracts under \$500,000. This overutilization is not statistically significant.



Table 6.01 Disparity Analysis: Construction Contracts under \$500,000, October 1, 2002 to September 30, 2007

Ethnicity^	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$681,312	8.29%	21.70%	\$1,782,299	-\$1,100,987	0.38	< .05 *
Asian Americans	\$0	0.00%	3.62%	\$297,396	-\$297,396	0.00	not significant
Hispanic Americans	\$2,661,535	32.40%	19.90%	\$1,634,640	\$1,026,894	1.63	**
Native Americans	\$567,597	6.91%	2.30%	\$189,252	\$378,345	3.00	**
Caucasian Females	\$1,224,960	14.91%	18.96%	\$1,557,692	-\$332,732	0.79	not significant
Caucasian Males	\$3,079,392	37.49%	33.52%	\$2,753,516	\$325,876	1.12	not significant
TOTAL	\$8,214,795	100.00%	100.00%	\$8,214,795			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$11,290	0.14%	4.43%	\$363,947	-\$352,657	0.03	not significant
African American Males	\$670,022	8.16%	17.27%	\$1,418,352	-\$748,330	0.47	< .05 *
Asian American Females	\$0	0.00%	0.84%	\$68,630	-\$68,630	0.00	----
Asian American Males	\$0	0.00%	2.78%	\$228,766	-\$228,766	0.00	not significant
Hispanic American Females	\$0	0.00%	3.57%	\$293,237	-\$293,237	0.00	not significant
Hispanic American Males	\$2,661,535	32.40%	16.33%	\$1,341,403	\$1,320,131	1.98	**
Native American Females	\$160,000	1.95%	0.78%	\$64,471	\$95,529	2.48	**
Native American Males	\$407,597	4.96%	1.52%	\$124,782	\$282,815	3.27	**
Caucasian Females	\$1,224,960	14.91%	18.96%	\$1,557,692	-\$332,732	0.79	not significant
Caucasian Males	\$3,079,392	37.49%	33.52%	\$2,753,516	\$325,876	1.12	not significant
TOTAL	\$8,214,795	100.00%	100.00%	\$8,214,795			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$171,290	2.09%	9.62%	\$790,284	-\$618,994	0.22	not significant
Minority Males	\$3,739,153	45.52%	37.90%	\$3,113,303	\$625,850	1.20	**
Caucasian Females	\$1,224,960	14.91%	18.96%	\$1,557,692	-\$332,732	0.79	not significant
Caucasian Males	\$3,079,392	37.49%	33.52%	\$2,753,516	\$325,876	1.12	not significant
TOTAL	\$8,214,795	100.00%	100.00%	\$8,214,795			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$3,910,443	47.60%	47.52%	\$3,903,587	\$6,856	1.00	**
Women Business Enterprises	\$1,224,960	14.91%	18.96%	\$1,557,692	-\$332,732	0.79	not significant
Minority and Women Business Enterprises	\$5,135,403	62.51%	66.48%	\$5,461,279	-\$325,876	0.94	not significant
Caucasian Male Business Enterprises	\$3,079,392	37.49%	33.52%	\$2,753,516	\$325,876	1.12	not significant

(*) denotes a statistically significant underutilization.

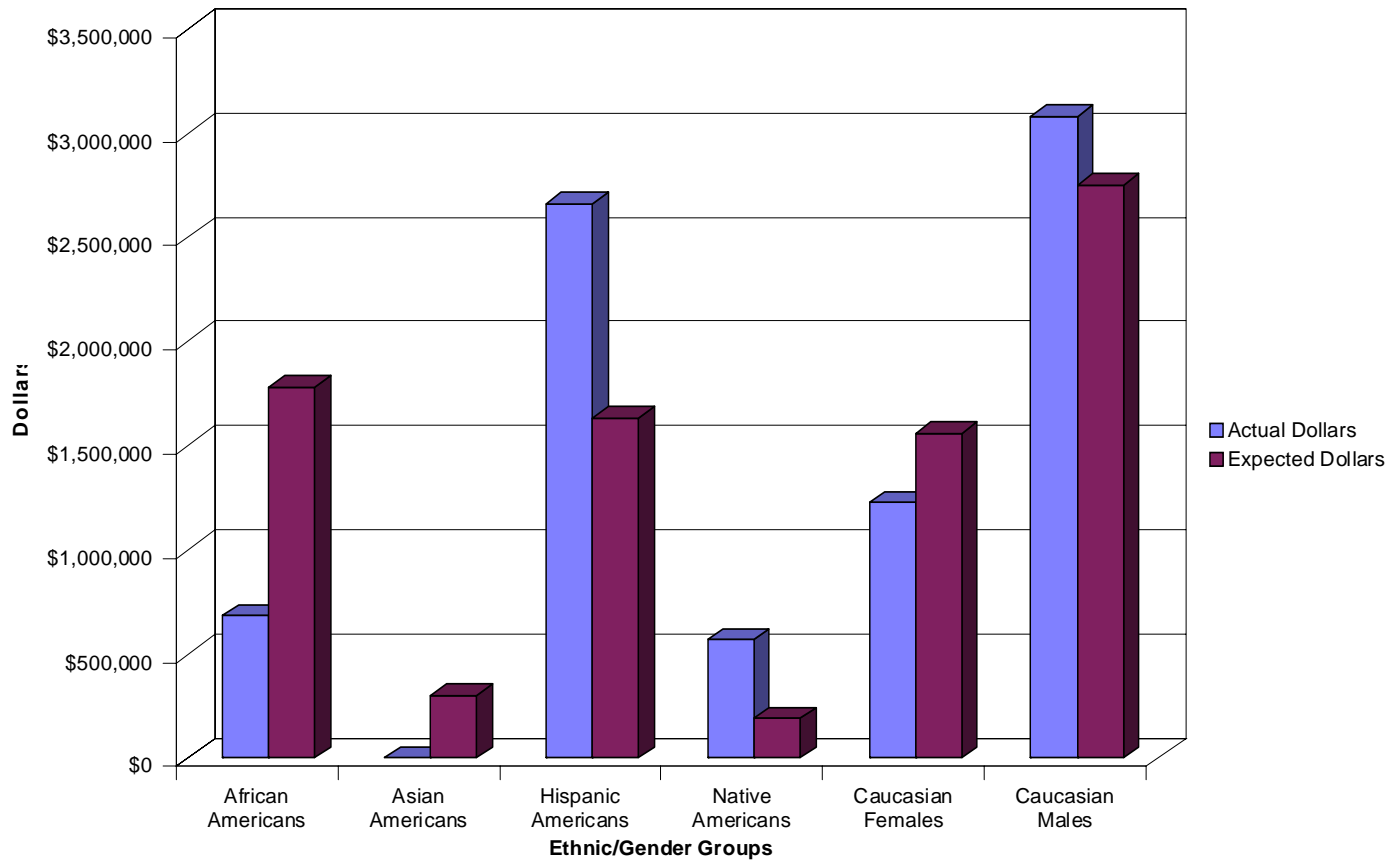
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

^ See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.01 Disparity Analysis: Construction Contracts under \$500,000, October 1, 2002 to September 30, 2007



2. Architecture and Engineering Contracts under \$500,000

The disparity analysis of all architecture and engineering contracts under \$500,000 is depicted in Table 6.02 and Chart 6.02.

African American Businesses represent 14.28 percent of the available architecture and engineering firms and received 2.6 percent of the dollars for architecture and engineering contracts under \$500,000. This underutilization is not statistically significant.

Asian American Businesses represent 8.18 percent of the available architecture and engineering firms and received none of the architecture and engineering contracts under \$500,000. This underutilization is not statistically significant.

Hispanic American Businesses represent 11.86 percent of the available architecture and engineering firms and received none of the dollars for architecture and engineering contracts under \$500,000. This underutilization is not statistically significant.

Native American Businesses represent 1.41 percent of the available architecture and engineering firms and received none of the architecture and engineering contracts under \$500,000. This underutilization is not statistically significant.

Minority Business Enterprises represent 35.72 percent of the available architecture and engineering firms and received 2.6 percent of the dollars for architecture and engineering contracts under \$500,000. This underutilization is statistically significant.

Women Business Enterprises represent 18.3 percent of the available architecture and engineering firms and received 7.6 percent of the dollars for architecture and engineering contracts under \$500,000. This underutilization is not statistically significant.

Minority and Women Business Enterprises represent 54.02 percent of the available architecture and engineering firms and received 10.2 percent of the dollars for architecture and engineering contracts under \$500,000. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 45.98 percent of the available architecture and engineering firms and received 89.8 percent of the dollars for architecture and engineering contracts under \$500,000. This study does not test statistically the overutilization of Caucasian males.



Table 6.02 Disparity Analysis: Architecture and Engineering Contracts under \$500,000, October 1, 2002 to September 30, 2007

Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$76,759	2.60%	14.28%	\$421,395	-\$344,636	0.18	not significant
Asian Americans	\$0	0.00%	8.18%	\$241,362	-\$241,362	0.00	not significant
Hispanic Americans	\$0	0.00%	11.86%	\$350,173	-\$350,173	0.00	not significant
Native Americans	\$0	0.00%	1.41%	\$41,546	-\$41,546	0.00	not significant
Caucasian Females	\$224,325	7.60%	18.30%	\$540,098	-\$315,773	0.42	not significant
Caucasian Males	\$2,650,660	89.80%	45.98%	\$1,357,169	\$1,293,491	1.95	< .05 †
TOTAL	\$2,951,744	100.00%	100.00%	\$2,951,744			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$0	0.00%	2.82%	\$83,092	-\$83,092	0.00	not significant
African American Males	\$76,759	2.60%	11.46%	\$338,303	-\$261,544	0.23	not significant
Asian American Females	\$0	0.00%	1.61%	\$47,481	-\$47,481	0.00	not significant
Asian American Males	\$0	0.00%	6.57%	\$193,881	-\$193,881	0.00	not significant
Hispanic American Females	\$0	0.00%	2.28%	\$67,265	-\$67,265	0.00	not significant
Hispanic American Males	\$0	0.00%	9.58%	\$282,908	-\$282,908	0.00	not significant
Native American Females	\$0	0.00%	0.40%	\$11,870	-\$11,870	0.00	----
Native American Males	\$0	0.00%	1.01%	\$29,676	-\$29,676	0.00	not significant
Caucasian Females	\$224,325	7.60%	18.30%	\$540,098	-\$315,773	0.42	not significant
Caucasian Males	\$2,650,660	89.80%	45.98%	\$1,357,169	\$1,293,491	1.95	< .05 †
TOTAL	\$2,951,744	100.00%	100.00%	\$2,951,744			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$0	0.00%	7.10%	\$209,708	-\$209,708	0.00	not significant
Minority Males	\$76,759	2.60%	28.62%	\$844,769	-\$768,010	0.09	< .05 *
Caucasian Females	\$224,325	7.60%	18.30%	\$540,098	-\$315,773	0.42	not significant
Caucasian Males	\$2,650,660	89.80%	45.98%	\$1,357,169	\$1,293,491	1.95	< .05 †
TOTAL	\$2,951,744	100.00%	100.00%	\$2,951,744			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$76,759	2.60%	35.72%	\$1,054,477	-\$977,718	0.07	< .05 *
Women Business Enterprises	\$224,325	7.60%	18.30%	\$540,098	-\$315,773	0.42	not significant
Minority and Women Business Enterprises	\$301,084	10.20%	54.02%	\$1,594,575	-\$1,293,491	0.19	< .05 *
Caucasian Male Business Enterprises	\$2,650,660	89.80%	45.98%	\$1,357,169	\$1,293,491	1.95	< .05 †

(*) denotes a statistically significant underutilization.

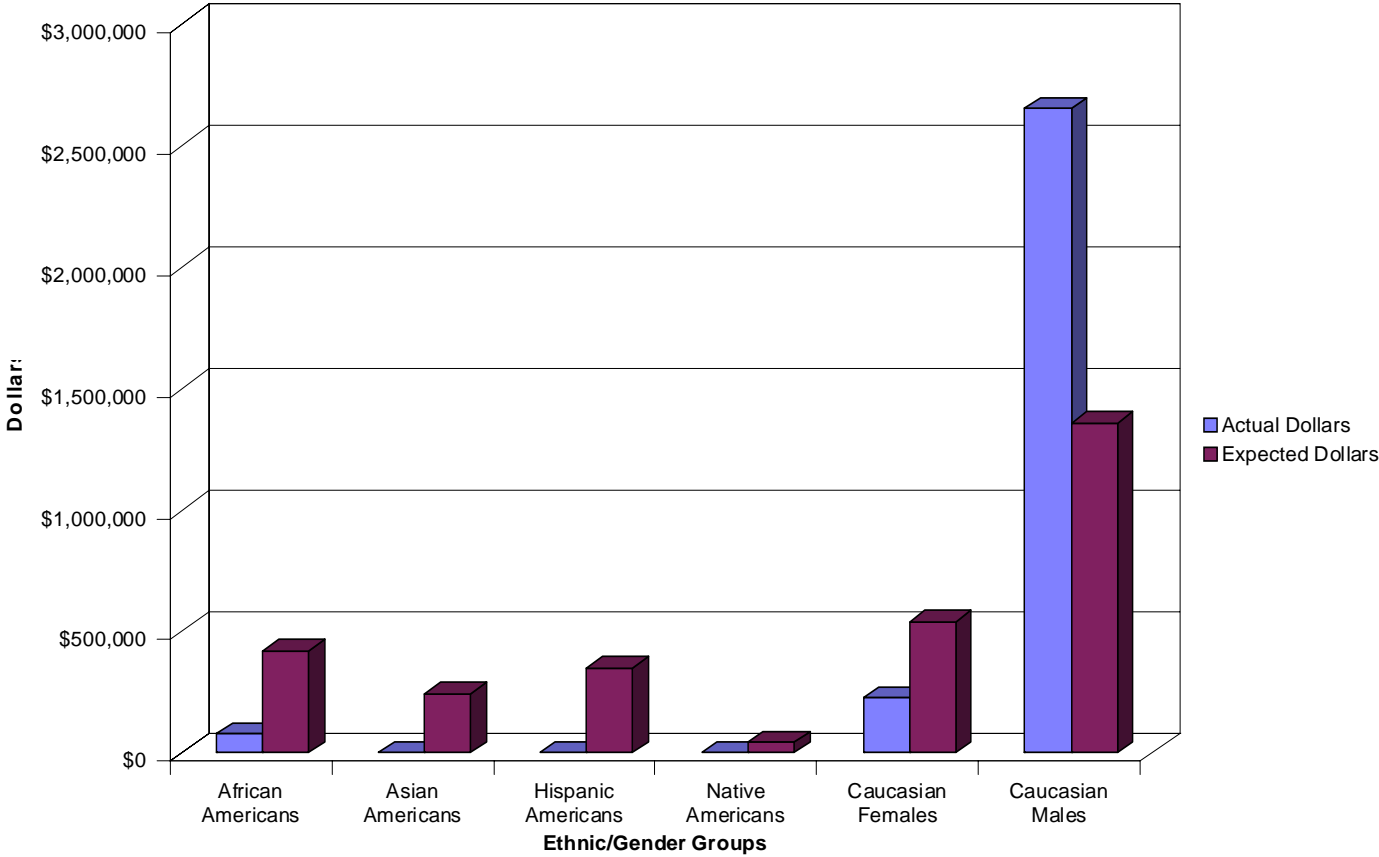
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.02 Disparity Analysis: Architecture and Engineering Contracts under \$500,000, October 1, 2002 to September 30, 2007



Mason Tilman Associates, Ltd. August 2010
 Dallas/Fort Worth International Airport Board Availability and Disparity Study

3. Professional Services Contracts under \$500,000

The disparity analysis of all professional services contracts under \$500,000 is depicted in Table 6.03 and Chart 6.03.

African American Businesses represent 20.59 percent of the available professional services firms and received 3.86 percent of the dollars for professional services contracts under \$500,000. This underutilization is statistically significant.

Asian American Businesses represent 6.31 percent of the available professional services firms and received none of the professional services contracts under \$500,000. This underutilization is statistically significant.

Hispanic American Businesses represent 8.87 percent of the available professional services firms and received 12.13 percent of the dollars for professional services contracts under \$500,000. This study does not test statistically the overutilization of minority groups.

Native American Businesses represent 1.02 percent of the available professional services firms and received 3.06 percent of the dollars for professional services contracts under \$500,000. This study does not test statistically the overutilization of minority groups.

Minority Business Enterprises represent 36.79 percent of the available professional services firms and received 19.05 percent of the dollars for professional services contracts under \$500,000. This underutilization is statistically significant.

Women Business Enterprises represent 25.29 percent of the available professional services firms and received 1.04 percent of the dollars for professional services contracts under \$500,000. This underutilization is statistically significant.

Minority and Women Business Enterprises represent 62.08 percent of the available professional services firms and received 20.09 percent of the dollars for professional services contracts under \$500,000. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 37.92 percent of the available professional services firms and received 79.91 percent of the dollars for professional services contracts under \$500,000. This study does not test statistically the overutilization of Caucasian males.



Table 6.03 Disparity Analysis: Professional Services Contracts under \$500,000, October 1, 2002 to September 30, 2007

Ethnicity^A	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$351,800	3.86%	20.59%	\$1,876,445	-\$1,524,645	0.19	< .05 *
Asian Americans	\$0	0.00%	6.31%	\$575,220	-\$575,220	0.00	< .05 *
Hispanic Americans	\$1,105,444	12.13%	8.87%	\$807,914	\$297,530	1.37	**
Native Americans	\$278,600	3.06%	1.02%	\$93,078	\$185,522	2.99	**
Caucasian Females	\$94,531	1.04%	25.29%	\$2,304,602	-\$2,210,071	0.04	< .05 *
Caucasian Males	\$7,281,926	79.91%	37.92%	\$3,455,042	\$3,826,884	2.11	< .05 †
TOTAL	\$9,112,301	100.00%	100.00%	\$9,112,301			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$65,700	0.72%	9.38%	\$854,453	-\$788,753	0.08	< .05 *
African American Males	\$286,100	3.14%	11.22%	\$1,021,993	-\$735,893	0.28	< .05 *
Asian American Females	\$0	0.00%	2.02%	\$184,294	-\$184,294	0.00	not significant
Asian American Males	\$0	0.00%	4.29%	\$390,926	-\$390,926	0.00	< .05 *
Hispanic American Females	\$335,000	3.68%	3.06%	\$279,233	\$55,767	1.20	**
Hispanic American Males	\$770,444	8.45%	5.80%	\$528,681	\$241,763	1.46	**
Native American Females	\$0	0.00%	0.41%	\$37,231	-\$37,231	0.00	----
Native American Males	\$278,600	3.06%	0.61%	\$55,847	\$222,753	4.99	**
Caucasian Females	\$94,531	1.04%	25.29%	\$2,304,602	-\$2,210,071	0.04	< .05 *
Caucasian Males	\$7,281,926	79.91%	37.92%	\$3,455,042	\$3,826,884	2.11	< .05 †
TOTAL	\$9,112,301	100.00%	100.00%	\$9,112,301			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$400,700	4.40%	14.87%	\$1,355,210	-\$954,510	0.30	< .05 *
Minority Males	\$1,335,144	14.65%	21.92%	\$1,997,446	-\$662,302	0.67	< .05 *
Caucasian Females	\$94,531	1.04%	25.29%	\$2,304,602	-\$2,210,071	0.04	< .05 *
Caucasian Males	\$7,281,926	79.91%	37.92%	\$3,455,042	\$3,826,884	2.11	< .05 †
TOTAL	\$9,112,301	100.00%	100.00%	\$9,112,301			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$1,735,844	19.05%	36.79%	\$3,352,657	-\$1,616,813	0.52	< .05 *
Women Business Enterprises	\$94,531	1.04%	25.29%	\$2,304,602	-\$2,210,071	0.04	< .05 *
Minority and Women Business Enterprises	\$1,830,375	20.09%	62.08%	\$5,657,259	-\$3,826,884	0.32	< .05 *
Caucasian Male Business Enterprises	\$7,281,926	79.91%	37.92%	\$3,455,042	\$3,826,884	2.11	< .05 †

(*) denotes a statistically significant underutilization.

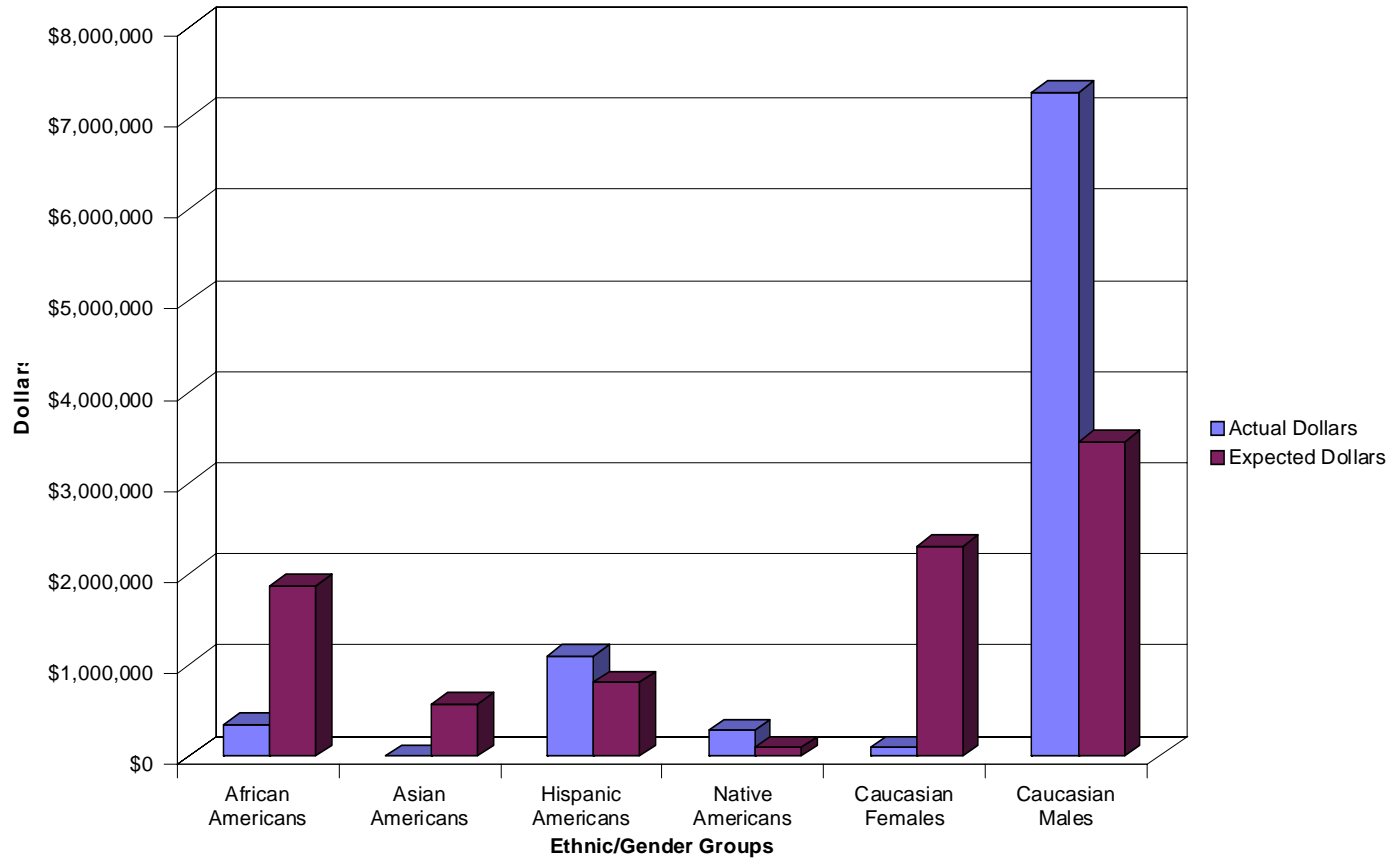
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

^A See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.03 Disparity Analysis: Professional Services Contracts under \$500,000, October 1, 2002 to September 30, 2007



4. Non-Professional Services Contracts under \$500,000

The disparity analysis of all non-professional services contracts under \$500,000 is depicted in Table 6.04 and Chart 6.04.

African American Businesses represent 19.71 percent of the available non-professional services firms and received 8.32 percent of the dollars for non-professional services contracts under \$500,000. This underutilization is statistically significant.

Asian American Businesses represent 3.31 percent of the available non-professional services firms and received 6.02 percent of the dollars for non-professional services contracts under \$500,000. This study does not test statistically the overutilization of minority groups.

Hispanic American Businesses represent 9.57 percent of the available non-professional services firms and received 2.61 percent of the dollars for non-professional services contracts under \$500,000. This underutilization is statistically significant.

Native American Businesses represent 0.87 percent of the available non-professional services firms and received 2.1 percent of the dollars for non-professional services contracts under \$500,000. This study does not test statistically the overutilization of minority groups.

Minority Business Enterprises represent 33.46 percent of the available non-professional services firms and received 19.05 percent of the dollars for non-professional services contracts under \$500,000. This underutilization is statistically significant.

Women Business Enterprises represent 20.14 percent of the available non-professional services firms and received 12.95 percent of the dollars for non-professional services contracts under \$500,000. This underutilization is statistically significant.

Minority and Women Business Enterprises represent 53.6 percent of the available non-professional services firms and received 32 percent of the dollars for non-professional services contracts under \$500,000. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 46.4 percent of the available non-professional services firms and received 68 of the dollars for non-professional services contracts under \$500,000. This study does not test statistically the overutilization of Caucasian males.



Table 6.04 Disparity Analysis: Non-Professional Services Contracts under \$500,000, October 1, 2002 to September 30, 2007

Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$2,413,573	8.32%	19.71%	\$5,719,958	-\$3,306,385	0.42	< .05 *
Asian Americans	\$1,746,986	6.02%	3.31%	\$959,868	\$787,118	1.82	**
Hispanic Americans	\$758,742	2.61%	9.57%	\$2,776,124	-\$2,017,383	0.27	< .05 *
Native Americans	\$609,800	2.10%	0.87%	\$253,348	\$356,452	2.41	**
Caucasian Females	\$3,758,645	12.95%	20.14%	\$5,844,848	-\$2,086,202	0.64	< .05 *
Caucasian Males	\$19,733,101	68.00%	46.40%	\$13,466,700	\$6,266,401	1.47	< .05 †
TOTAL	\$29,020,846	100.00%	100.00%	\$29,020,846			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$963,892	3.32%	6.85%	\$1,987,534	-\$1,023,642	0.48	< .05 *
African American Males	\$1,449,681	5.00%	12.86%	\$3,732,424	-\$2,282,743	0.39	< .05 *
Asian American Females	\$543,276	1.87%	1.07%	\$310,441	\$232,836	1.75	**
Asian American Males	\$1,203,710	4.15%	2.24%	\$649,428	\$554,282	1.85	**
Hispanic American Females	\$60,101	0.21%	2.93%	\$849,251	-\$789,150	0.07	< .05 *
Hispanic American Males	\$698,641	2.41%	6.64%	\$1,926,873	-\$1,228,232	0.36	< .05 *
Native American Females	\$0	0.00%	0.39%	\$114,185	-\$114,185	0.00	----
Native American Males	\$609,800	2.10%	0.48%	\$139,163	\$470,637	4.38	**
Caucasian Females	\$3,758,645	12.95%	20.14%	\$5,844,848	-\$2,086,202	0.64	< .05 *
Caucasian Males	\$19,733,101	68.00%	46.40%	\$13,466,700	\$6,266,401	1.47	< .05 †
TOTAL	\$29,020,846	100.00%	100.00%	\$29,020,846			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$1,567,269	5.40%	11.24%	\$3,261,411	-\$1,694,142	0.48	< .05 *
Minority Males	\$3,961,831	13.65%	22.22%	\$6,447,888	-\$2,486,056	0.61	< .05 *
Caucasian Females	\$3,758,645	12.95%	20.14%	\$5,844,848	-\$2,086,202	0.64	< .05 *
Caucasian Males	\$19,733,101	68.00%	46.40%	\$13,466,700	\$6,266,401	1.47	< .05 †
TOTAL	\$29,020,846	100.00%	100.00%	\$29,020,846			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$5,529,100	19.05%	33.46%	\$9,709,298	-\$4,180,198	0.57	< .05 *
Women Business Enterprises	\$3,758,645	12.95%	20.14%	\$5,844,848	-\$2,086,202	0.64	< .05 *
Minority and Women Business Enterprises	\$9,287,745	32.00%	53.60%	\$15,554,146	-\$6,266,401	0.60	< .05 *
Caucasian Male Business Enterprises	\$19,733,101	68.00%	46.40%	\$13,466,700	\$6,266,401	1.47	< .05 †

(*) denotes a statistically significant underutilization.

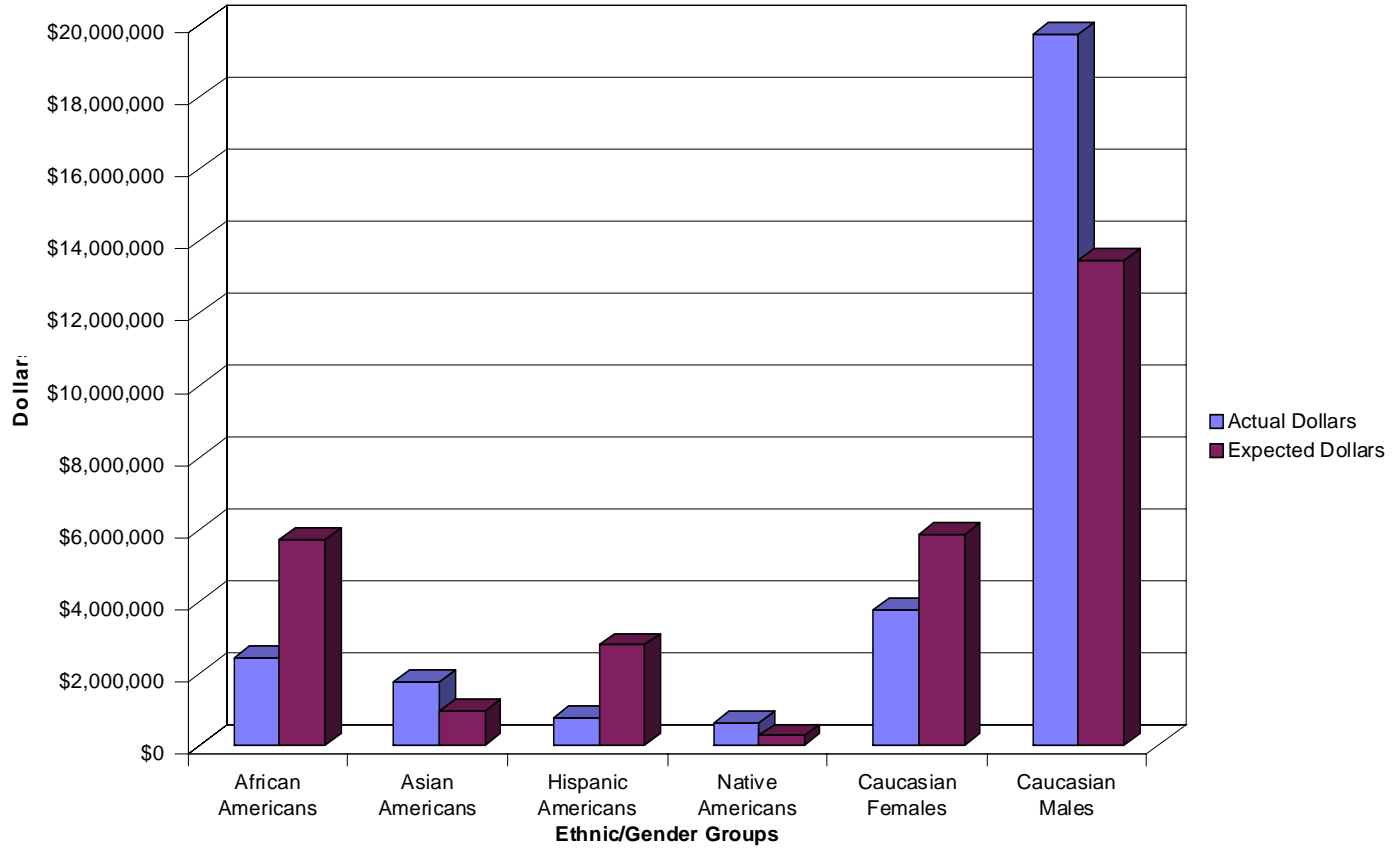
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.04 Disparity Analysis: Non-Professional Services Contracts under \$500,000, October 1, 2002 to September 30, 2007



5. Goods Contracts under \$500,000

The disparity analysis of all goods contracts under \$500,000 is depicted in Table 6.05 and Chart 6.05.

African American Businesses represent 13.09 percent of the available goods firms and received 4.84 percent of the dollars for goods contracts under \$500,000. This underutilization is statistically significant.

Asian American Businesses represent 4.4 percent of the available goods firms and received 4.37 percent of the dollars for goods contracts under \$500,000. This underutilization is not statistically significant.

Hispanic American Businesses represent 7.47 percent of the available goods firms and received 3.88 percent of the dollars for goods contracts under \$500,000. This underutilization is statistically significant.

Native American Businesses represent 1.61 percent of the available goods firms and received 2.63 percent of the dollars for goods contracts under \$500,000. This study does not test statistically the overutilization of minority groups.

Minority Business Enterprises represent 26.57 percent of the available goods firms and received 15.72 percent of the dollars for goods contracts under \$500,000. This underutilization is statistically significant.

Women Business Enterprises represent 20.15 percent of the available goods firms and received 9.4 percent of the dollars for goods contracts under \$500,000. This underutilization is statistically significant.

Minority and Women Business Enterprises represent 46.71 percent of the available goods firms and received 25.12 percent of the dollars for goods contracts under \$500,000. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 53.29 percent of the available goods firms and received 74.88 percent of the dollars for goods contracts under \$500,000. This study does not test statistically the overutilization of Caucasian males.



Table 6.05 Disparity Analysis: Goods Contracts under \$500,000, October 1, 2002 to September 30, 2007

Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$1,066,726	4.84%	13.09%	\$2,886,429	-\$1,819,703	0.37	< .05 *
Asian Americans	\$963,724	4.37%	4.40%	\$969,516	-\$5,792	0.99	not significant
Hispanic Americans	\$856,020	3.88%	7.47%	\$1,647,808	-\$791,788	0.52	< .05 *
Native Americans	\$580,091	2.63%	1.61%	\$353,892	\$226,200	1.64	**
Caucasian Females	\$2,072,822	9.40%	20.15%	\$4,442,078	-\$2,369,256	0.47	< .05 *
Caucasian Males	\$16,508,805	74.88%	53.29%	\$11,748,466	\$4,760,339	1.41	< .05 †
TOTAL	\$22,048,188	100.00%	100.00%	\$22,048,188			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$389,236	1.77%	4.83%	\$1,065,361	-\$676,125	0.37	< .05 *
African American Males	\$677,490	3.07%	8.26%	\$1,821,068	-\$1,143,578	0.37	< .05 *
Asian American Females	\$596,189	2.70%	1.40%	\$309,655	\$286,533	1.93	**
Asian American Males	\$367,535	1.67%	2.99%	\$659,861	-\$292,325	0.56	< .05 *
Hispanic American Females	\$119,169	0.54%	2.36%	\$519,778	-\$400,610	0.23	not significant
Hispanic American Males	\$736,851	3.34%	5.12%	\$1,128,030	-\$391,178	0.65	not significant
Native American Females	\$307,533	1.39%	0.60%	\$132,709	\$174,824	2.32	**
Native American Males	\$272,558	1.24%	1.00%	\$221,182	\$51,376	1.23	**
Caucasian Females	\$2,072,822	9.40%	20.15%	\$4,442,078	-\$2,369,256	0.47	< .05 *
Caucasian Males	\$16,508,805	74.88%	53.29%	\$11,748,466	\$4,760,339	1.41	< .05 †
TOTAL	\$22,048,188	100.00%	100.00%	\$22,048,188			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$1,412,127	6.40%	9.20%	\$2,027,504	-\$615,378	0.70	< .05 *
Minority Males	\$2,054,435	9.32%	17.37%	\$3,830,140	-\$1,775,705	0.54	< .05 *
Caucasian Females	\$2,072,822	9.40%	20.15%	\$4,442,078	-\$2,369,256	0.47	< .05 *
Caucasian Males	\$16,508,805	74.88%	53.29%	\$11,748,466	\$4,760,339	1.41	< .05 †
TOTAL	\$22,048,188	100.00%	100.00%	\$22,048,188			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$3,466,561	15.72%	26.57%	\$5,857,644	-\$2,391,083	0.59	< .05 *
Women Business Enterprises	\$2,072,822	9.40%	20.15%	\$4,442,078	-\$2,369,256	0.47	< .05 *
Minority and Women Business Enterprises	\$5,539,383	25.12%	46.71%	\$10,299,722	-\$4,760,339	0.54	< .05 *
Caucasian Male Business Enterprises	\$16,508,805	74.88%	53.29%	\$11,748,466	\$4,760,339	1.41	< .05 †

(*) denotes a statistically significant underutilization.

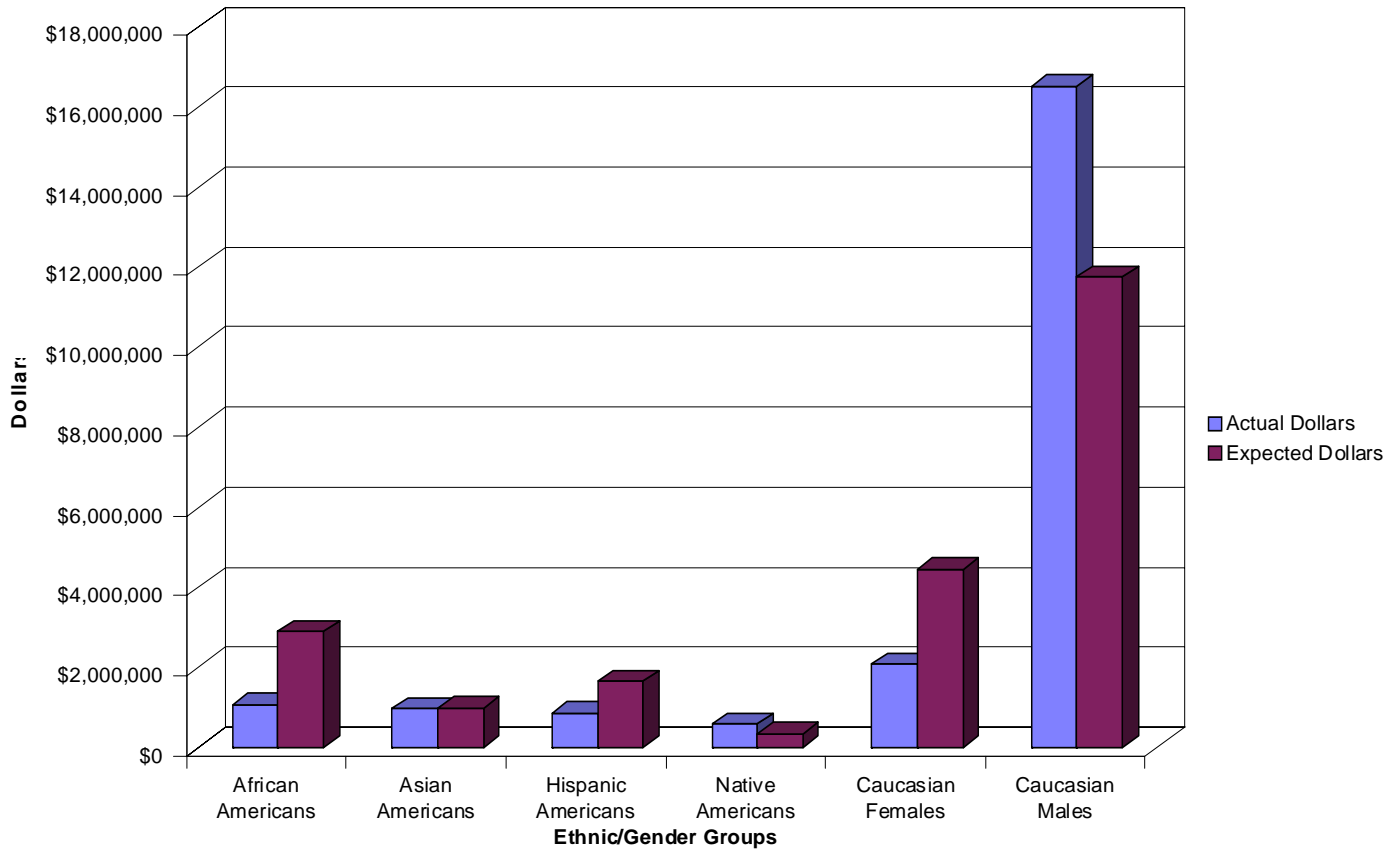
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.05 Disparity Analysis: Goods Contracts under \$500,000, October 1, 2002 to September 30, 2007



B. Disparity Analysis: All Contracts \$25,000 or \$40,000 and under, by Industry

1. Construction Contracts \$25,000 and under

The disparity analysis of all construction contracts \$25,000 and under is depicted in Table 6.06 and Chart 6.06.

African American Businesses represent 21.7 percent of the available construction firms and received 21.13 percent of the dollars for construction contracts \$25,000 and under. This underutilization is not statistically significant.

Asian American Businesses represent 3.62 percent of the available construction firms and received none of the construction contracts \$25,000 and under. This underutilization is not statistically significant.

Hispanic American Businesses represent 19.9 percent of the available construction firms and received 30.98 percent of the dollars for construction contracts \$25,000 and under. This study does not test statistically the overutilization of minority groups.

Native American Businesses represent 2.3 percent of the available construction firms and received none of the construction contracts \$25,000 and under. This underutilization is not statistically significant.

Minority Business Enterprises represent 47.52 percent of the available construction firms and received 52.11 percent of the dollars for construction contracts \$25,000 and under. This study does not test statistically the overutilization of minority groups.

Women Business Enterprises represent 18.96 percent of the available construction firms and received none of the construction contracts \$25,000 and under. This underutilization is not statistically significant.

Minority and Women Business Enterprises represent 66.48 percent of the available construction firms and received 52.11 percent of the dollars for construction contracts \$25,000 and under. This underutilization is not statistically significant.

Caucasian Male Business Enterprises represent 33.52 percent of the available construction firms and received 47.89 percent of the dollars for construction contracts \$25,000 and under. This overutilization is not statistically significant.



Table 6.06 Disparity Analysis: Construction Contracts \$25,000 and under, October 1, 2002 to September 30, 2007

Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$36,290	21.13%	21.70%	\$37,264	-\$974	0.97	not significant
Asian Americans	\$0	0.00%	3.62%	\$6,218	-\$6,218	0.00	not significant
Hispanic Americans	\$53,210	30.98%	19.90%	\$34,177	\$19,033	1.56	**
Native Americans	\$0	0.00%	2.30%	\$3,957	-\$3,957	0.00	not significant
Caucasian Females	\$0	0.00%	18.96%	\$32,568	-\$32,568	0.00	not significant
Caucasian Males	\$82,256	47.89%	33.52%	\$57,571	\$24,685	1.43	not significant
TOTAL	\$171,756	100.00%	100.00%	\$171,756			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$11,290	6.57%	4.43%	\$7,609	\$3,681	1.48	**
African American Males	\$25,000	14.56%	17.27%	\$29,655	-\$4,655	0.84	not significant
Asian American Females	\$0	0.00%	0.84%	\$1,435	-\$1,435	0.00	----
Asian American Males	\$0	0.00%	2.78%	\$4,783	-\$4,783	0.00	not significant
Hispanic American Females	\$0	0.00%	3.57%	\$6,131	-\$6,131	0.00	not significant
Hispanic American Males	\$53,210	30.98%	16.33%	\$28,046	\$25,164	1.90	**
Native American Females	\$0	0.00%	0.78%	\$1,348	-\$1,348	0.00	----
Native American Males	\$0	0.00%	1.52%	\$2,609	-\$2,609	0.00	not significant
Caucasian Females	\$0	0.00%	18.96%	\$32,568	-\$32,568	0.00	not significant
Caucasian Males	\$82,256	47.89%	33.52%	\$57,571	\$24,685	1.43	not significant
TOTAL	\$171,756	100.00%	100.00%	\$171,756			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$11,290	6.57%	9.62%	\$16,523	-\$5,233	0.68	not significant
Minority Males	\$78,210	45.54%	37.90%	\$65,093	\$13,117	1.20	**
Caucasian Females	\$0	0.00%	18.96%	\$32,568	-\$32,568	0.00	not significant
Caucasian Males	\$82,256	47.89%	33.52%	\$57,571	\$24,685	1.43	not significant
TOTAL	\$171,756	100.00%	100.00%	\$171,756			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$89,500	52.11%	47.52%	\$81,616	\$7,884	1.10	**
Women Business Enterprises	\$0	0.00%	18.96%	\$32,568	-\$32,568	0.00	not significant
Minority and Women Business Enterprises	\$89,500	52.11%	66.48%	\$114,185	-\$24,685	0.78	not significant
Caucasian Male Business Enterprises	\$82,256	47.89%	33.52%	\$57,571	\$24,685	1.43	not significant

(*) denotes a statistically significant underutilization.

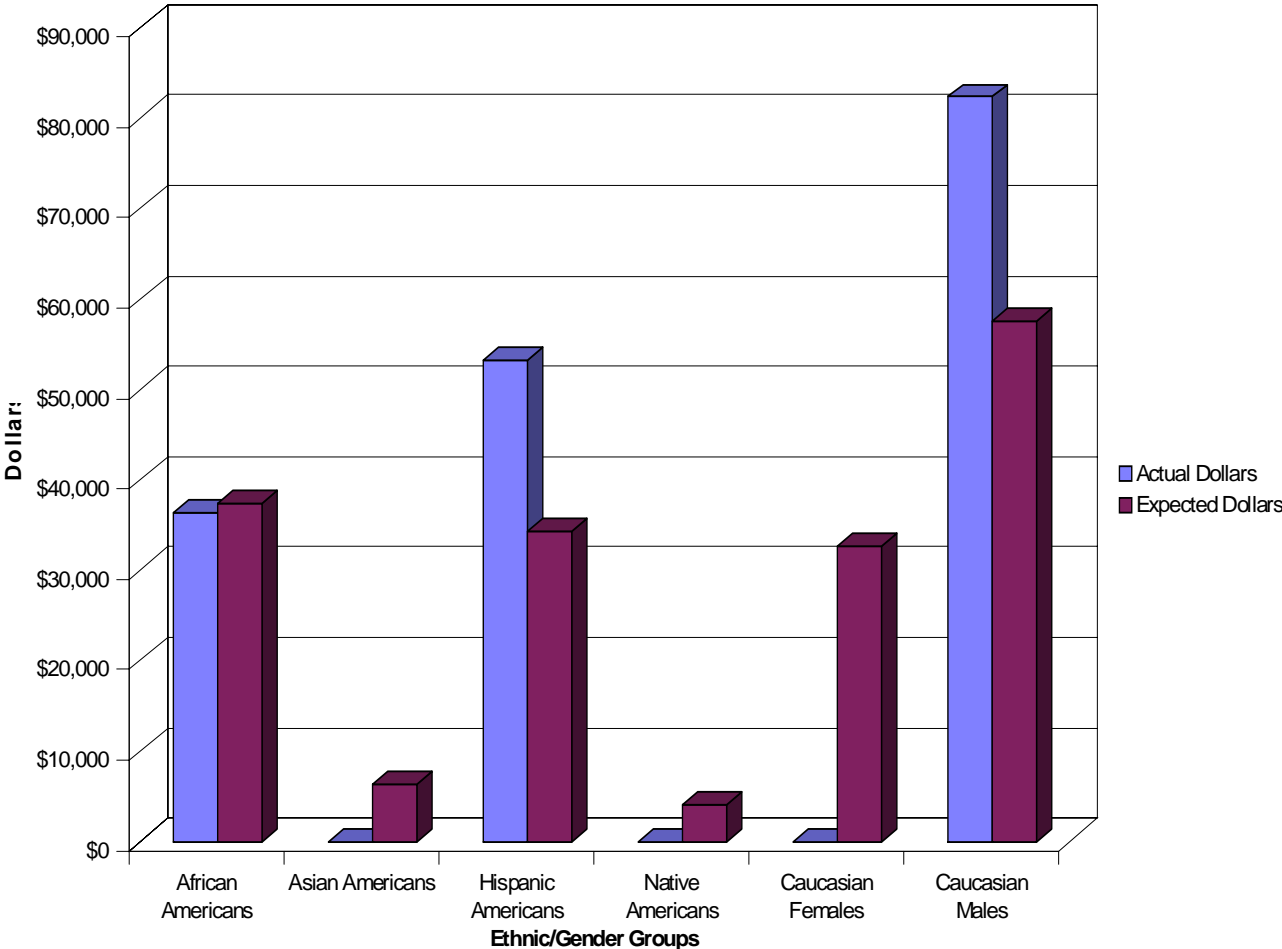
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.06 Disparity Analysis: Construction Contracts \$25,000 and under, October 1, 2002 to September 30, 2007



2. Architecture and Engineering Contracts \$40,000 and under

The disparity analysis of all architecture and engineering contracts \$40,000 and under is depicted in Table 6.07 and Chart 6.07.

African American Businesses represent 14.28 percent of the available architecture and engineering firms and received none of the architecture and engineering contracts \$40,000 and under. This underutilization is not statistically significant.

Asian American Businesses represent 8.18 percent of the available architecture and engineering firms and received none of the architecture and engineering contracts \$40,000 and under. This underutilization is not statistically significant.

Hispanic American Businesses represent 11.86 percent of the available architecture and engineering firms and received none of the architecture and engineering contracts \$40,000 and under. This underutilization is not statistically significant.

Native American Businesses represent 1.41 percent of the available architecture and engineering firms and received none of the architecture and engineering contracts \$40,000 and under. This underutilization is not statistically significant.

Minority Business Enterprises represent 35.72 percent of the available architecture and engineering firms and received none of the architecture and engineering contracts \$40,000 and under. This underutilization is statistically significant.

Women Business Enterprises represent 18.3 percent of the available architecture and engineering firms and received 31.51 percent of the dollars for architecture and engineering contracts \$40,000 and under. This study does not test statistically the overutilization of women business groups.

Minority and Women Business Enterprises represent 54.02 percent of the available architecture and engineering firms and received 31.51 percent of the dollars for architecture and engineering contracts \$40,000 and under. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 45.98 percent of the available architecture and engineering firms and received 68.49 percent of the dollars for architecture and engineering contracts \$40,000 and under. This study does not test statistically the overutilization of Caucasian males.



Table 6.07 Disparity Analysis: Architecture and Engineering Contracts \$40,000 and under, October 1, 2002 to September 30, 2007

Ethnicity [^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$0	0.00%	14.28%	\$38,202	-\$38,202	0.00	not significant
Asian Americans	\$0	0.00%	8.18%	\$21,881	-\$21,881	0.00	not significant
Hispanic Americans	\$0	0.00%	11.86%	\$31,746	-\$31,746	0.00	not significant
Native Americans	\$0	0.00%	1.41%	\$3,766	-\$3,766	0.00	not significant
Caucasian Females	\$84,325	31.51%	18.30%	\$48,964	\$35,362	1.72	**
Caucasian Males	\$183,271	68.49%	45.98%	\$123,037	\$60,234	1.49	< .05 †
TOTAL	\$267,596	100.00%	100.00%	\$267,596			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$0	0.00%	2.82%	\$7,533	-\$7,533	0.00	not significant
African American Males	\$0	0.00%	11.46%	\$30,670	-\$30,670	0.00	not significant
Asian American Females	\$0	0.00%	1.61%	\$4,304	-\$4,304	0.00	not significant
Asian American Males	\$0	0.00%	6.57%	\$17,577	-\$17,577	0.00	not significant
Hispanic American Females	\$0	0.00%	2.28%	\$6,098	-\$6,098	0.00	not significant
Hispanic American Males	\$0	0.00%	9.58%	\$25,648	-\$25,648	0.00	not significant
Native American Females	\$0	0.00%	0.40%	\$1,076	-\$1,076	0.00	----
Native American Males	\$0	0.00%	1.01%	\$2,690	-\$2,690	0.00	not significant
Caucasian Females	\$84,325	31.51%	18.30%	\$48,964	\$35,362	1.72	**
Caucasian Males	\$183,271	68.49%	45.98%	\$123,037	\$60,234	1.49	< .05 †
TOTAL	\$267,596	100.00%	100.00%	\$267,596			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$0	0.00%	7.10%	\$19,012	-\$19,012	0.00	not significant
Minority Males	\$0	0.00%	28.62%	\$76,584	-\$76,584	0.00	< .05 *
Caucasian Females	\$84,325	31.51%	18.30%	\$48,964	\$35,362	1.72	**
Caucasian Males	\$183,271	68.49%	45.98%	\$123,037	\$60,234	1.49	< .05 †
TOTAL	\$267,596	100.00%	100.00%	\$267,596			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$0	0.00%	35.72%	\$95,596	-\$95,596	0.00	< .05 *
Women Business Enterprises	\$84,325	31.51%	18.30%	\$48,964	\$35,362	1.72	**
Minority and Women Business Enterprises	\$84,325	31.51%	54.02%	\$144,559	-\$60,234	0.58	< .05 *
Caucasian Male Business Enterprises	\$183,271	68.49%	45.98%	\$123,037	\$60,234	1.49	< .05 †

(*) denotes a statistically significant underutilization.

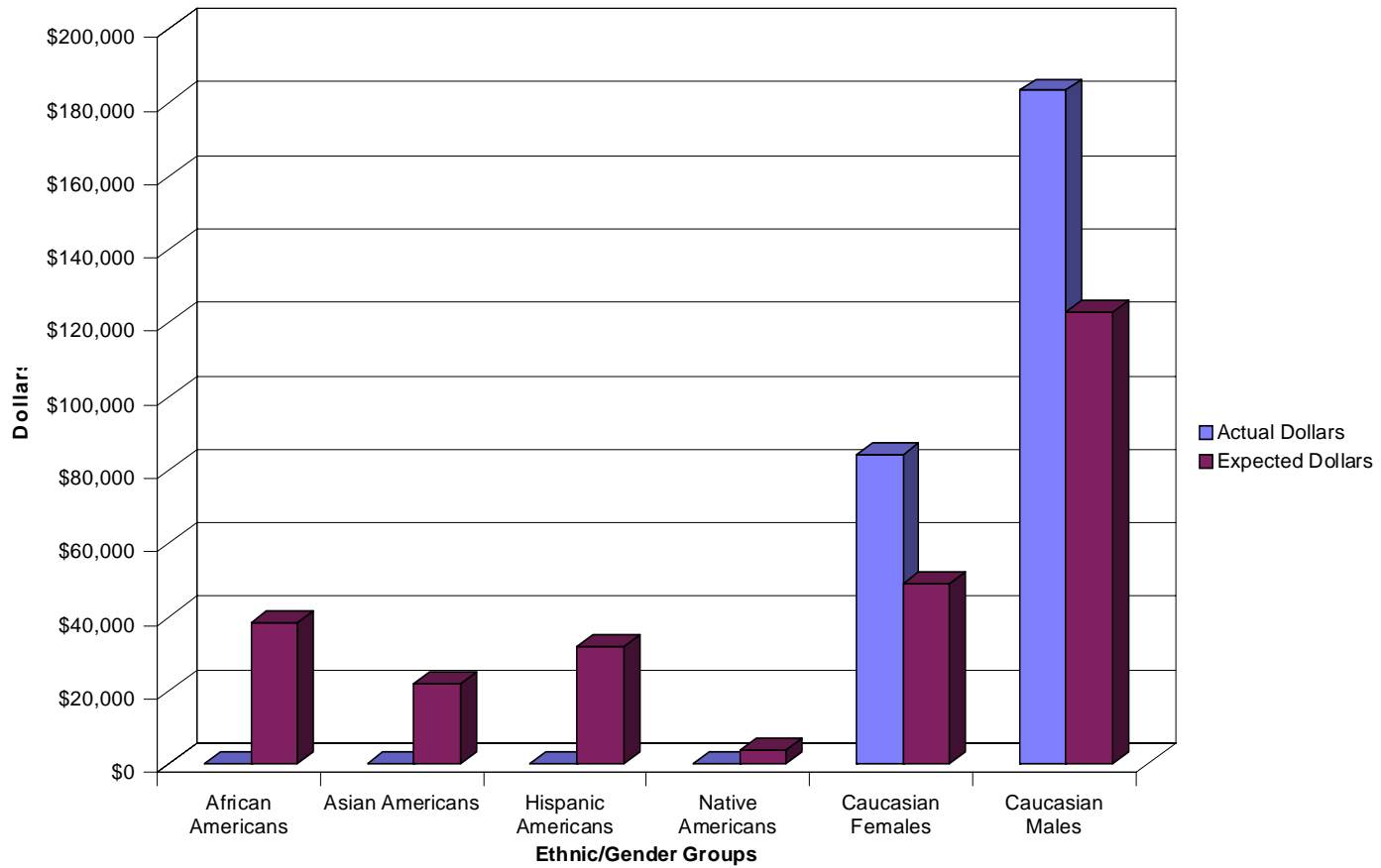
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.07 Disparity Analysis: Architecture and Engineering Contracts \$40,000 and under, October 1, 2002 to September 30, 2007



3. Professional Services Contracts \$40,000 and under

The disparity analysis of all professional services contracts \$40,000 and under is depicted in Table 6.08 and Chart 6.08.

African American Businesses represent 20.59 percent of the available professional services firms and received 1.5 percent of the dollars for professional services contracts \$40,000 and under. This underutilization is statistically significant.

Asian American Businesses represent 6.31 percent of the available professional services firms and received none of the professional services contracts \$40,000 and under. This underutilization is statistically significant.

Hispanic American Businesses represent 8.87 percent of the available professional services firms and received 2.46 percent of the dollars for professional services contracts \$40,000 and under. This underutilization is statistically significant.

Native American Businesses represent 1.02 percent of the available professional services firms and received 0.77 percent of the dollars for professional services contracts \$40,000 and under. This underutilization is not statistically significant.

Minority Business Enterprises represent 36.79 percent of the available professional services firms and received 4.73 percent of the dollars for professional services contracts \$40,000 and under. This underutilization is statistically significant.

Women Business Enterprises represent 25.29 percent of the available professional services firms and received 2.85 percent of the dollars for professional services contracts \$40,000 and under. This underutilization is statistically significant.

Minority and Women Business Enterprises represent 62.08 percent of the available professional services firms and received 7.58 percent of the dollars for professional services contracts \$40,000 and under. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 37.92 percent of the available professional services firms and received 92.42 percent of the dollars for professional services contracts \$40,000 and under. This study does not test statistically the overutilization of Caucasian males.



Table 6.08 Disparity Analysis: Professional Services Contracts \$40,000 and under, October 1, 2002 to September 30, 2007

Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$15,500	1.50%	20.59%	\$213,112	-\$197,612	0.07	< .05 *
Asian Americans	\$0	0.00%	6.31%	\$65,329	-\$65,329	0.00	< .05 *
Hispanic Americans	\$25,444	2.46%	8.87%	\$91,757	-\$66,313	0.28	< .05 *
Native Americans	\$8,000	0.77%	1.02%	\$10,571	-\$2,571	0.76	not significant
Caucasian Females	\$29,531	2.85%	25.29%	\$261,739	-\$232,208	0.11	< .05 *
Caucasian Males	\$956,429	92.42%	37.92%	\$392,397	\$564,032	2.44	< .05 †
TOTAL	\$1,034,904	100.00%	100.00%	\$1,034,904			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$0	0.00%	9.38%	\$97,042	-\$97,042	0.00	< .05 *
African American Males	\$15,500	1.50%	11.22%	\$116,070	-\$100,570	0.13	< .05 *
Asian American Females	\$0	0.00%	2.02%	\$20,931	-\$20,931	0.00	not significant
Asian American Males	\$0	0.00%	4.29%	\$44,398	-\$44,398	0.00	< .05 *
Hispanic American Females	\$0	0.00%	3.06%	\$31,713	-\$31,713	0.00	< .05 *
Hispanic American Males	\$25,444	2.46%	5.80%	\$60,043	-\$34,600	0.42	not significant
Native American Females	\$0	0.00%	0.41%	\$4,228	-\$4,228	0.00	----
Native American Males	\$8,000	0.77%	0.61%	\$6,343	\$1,657	1.26	**
Caucasian Females	\$29,531	2.85%	25.29%	\$261,739	-\$232,208	0.11	< .05 *
Caucasian Males	\$956,429	92.42%	37.92%	\$392,397	\$564,032	2.44	< .05 †
TOTAL	\$1,034,904	100.00%	100.00%	\$1,034,904			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$0	0.00%	14.87%	\$153,914	-\$153,914	0.00	< .05 *
Minority Males	\$48,944	4.73%	21.92%	\$226,854	-\$177,910	0.22	< .05 *
Caucasian Females	\$29,531	2.85%	25.29%	\$261,739	-\$232,208	0.11	< .05 *
Caucasian Males	\$956,429	92.42%	37.92%	\$392,397	\$564,032	2.44	< .05 †
TOTAL	\$1,034,904	100.00%	100.00%	\$1,034,904			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$48,944	4.73%	36.79%	\$380,769	-\$331,825	0.13	< .05 *
Women Business Enterprises	\$29,531	2.85%	25.29%	\$261,739	-\$232,208	0.11	< .05 *
Minority and Women Business Enterprises	\$78,475	7.58%	62.08%	\$642,507	-\$564,032	0.12	< .05 *
Caucasian Male Business Enterprises	\$956,429	92.42%	37.92%	\$392,397	\$564,032	2.44	< .05 †

(*) denotes a statistically significant underutilization.

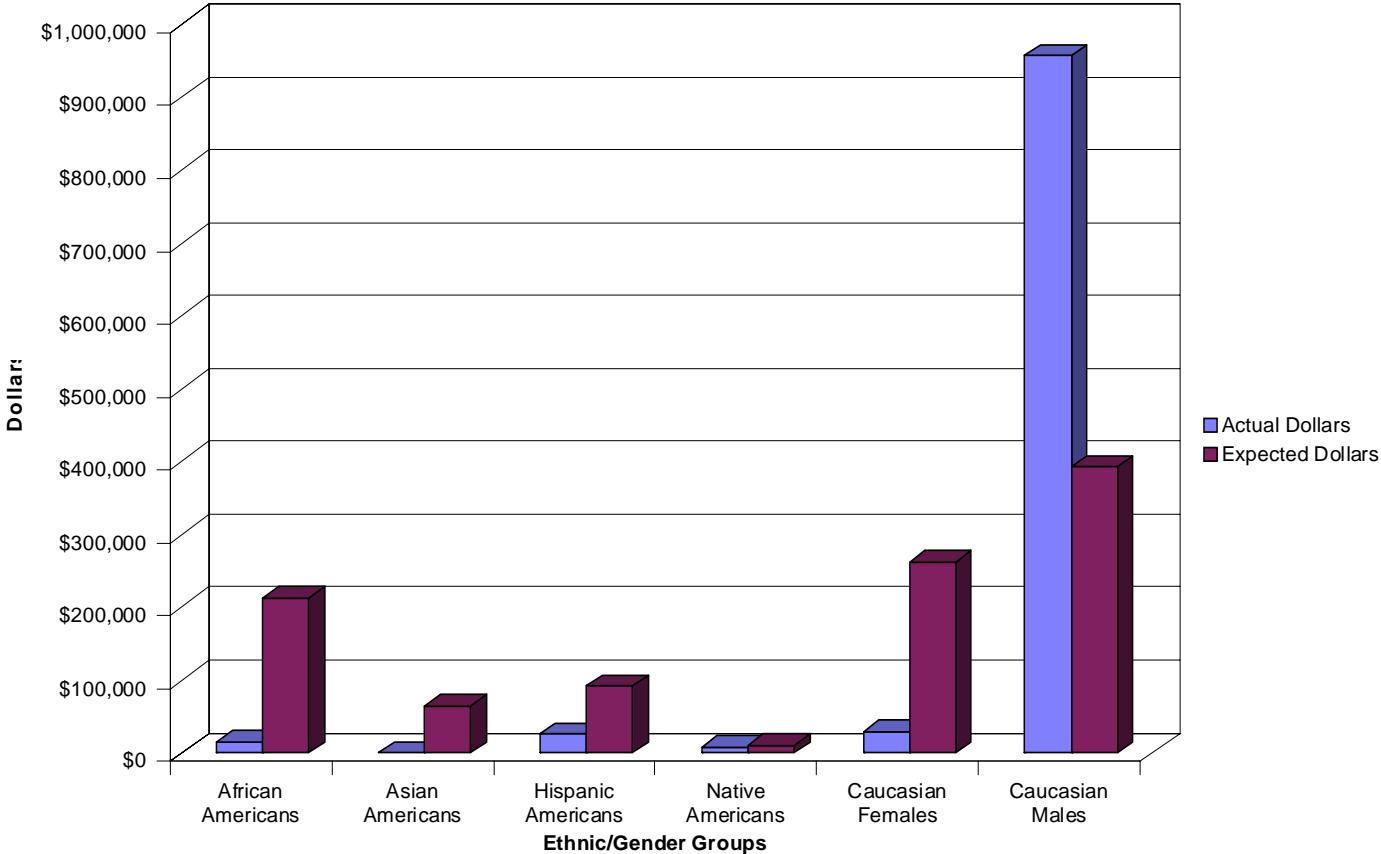
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.08 Disparity Analysis: Professional Services Contracts \$40,000 and under, October 1, 2002 to September 30, 2007



4. Non-Professional Services Contracts \$25,000 and under

The disparity analysis of all non-professional services contracts \$25,000 and under is depicted in Table 6.09 and Chart 6.09.

African American Businesses represent 19.71 percent of the available non-professional services firms and received 3.73 percent of the dollars for non-professional services contracts \$25,000 and under. This underutilization is statistically significant.

Asian American Businesses represent 3.31 percent of the available non-professional services firms and received 0.42 percent of the dollars for non-professional services contracts \$25,000 and under. This underutilization is statistically significant.

Hispanic American Businesses represent 9.57 percent of the available non-professional services firms and received 2.37 percent of the dollars for non-professional services contracts \$25,000 and under. This underutilization is statistically significant.

Native American Businesses represent 0.87 percent of the available non-professional services firms and received none of the dollars for non-professional services contracts \$25,000 and under. While this group was underutilized, there were too few available firms to determine statistical significance.

Minority Business Enterprises represent 33.46 percent of the available non-professional services firms and received 6.52 percent of the dollars for non-professional services contracts \$25,000 and under. This underutilization is statistically significant.

Women Business Enterprises represent 20.14 percent of the available non-professional services firms and received 10.73 percent of the dollars for non-professional services contracts \$25,000 and under. This underutilization is statistically significant.

Minority and Women Business Enterprises represent 53.6 percent of the available non-professional services firms and received 17.25 percent of the dollars for non-professional services contracts \$25,000 and under. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 46.4 percent of the available non-professional services firms and received 82.75 percent of the dollars for non-professional services contracts \$25,000 and under. This study does not test statistically the overutilization of Caucasian males.



Table 6.09 Disparity Analysis: Non-Professional Services Contracts \$25,000 and under, October 1, 2002 to September 30, 2007

Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$119,494	3.73%	19.71%	\$631,146	-\$511,652	0.19	< .05 *
Asian Americans	\$13,441	0.42%	3.31%	\$105,913	-\$92,471	0.13	< .05 *
Hispanic Americans	\$75,765	2.37%	9.57%	\$306,320	-\$230,555	0.25	< .05 *
Native Americans	\$0	0.00%	0.87%	\$27,955	-\$27,955	0.00	----
Caucasian Females	\$343,552	10.73%	20.14%	\$644,926	-\$301,375	0.53	< .05 *
Caucasian Males	\$2,649,937	82.75%	46.40%	\$1,485,929	\$1,164,008	1.78	< .05 †
TOTAL	\$3,202,189	100.00%	100.00%	\$3,202,189			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$39,870	1.25%	6.85%	\$219,306	-\$179,436	0.18	< .05 *
African American Males	\$79,624	2.49%	12.86%	\$411,839	-\$332,216	0.19	< .05 *
Asian American Females	\$13,329	0.42%	1.07%	\$34,254	-\$20,925	0.39	not significant
Asian American Males	\$112	0.00%	2.24%	\$71,658	-\$71,546	0.00	< .05 *
Hispanic American Females	\$0	0.00%	2.93%	\$93,707	-\$93,707	0.00	< .05 *
Hispanic American Males	\$75,765	2.37%	6.64%	\$212,613	-\$136,848	0.36	< .05 *
Native American Females	\$0	0.00%	0.39%	\$12,599	-\$12,599	0.00	----
Native American Males	\$0	0.00%	0.48%	\$15,355	-\$15,355	0.00	----
Caucasian Females	\$343,552	10.73%	20.14%	\$644,926	-\$301,375	0.53	< .05 *
Caucasian Males	\$2,649,937	82.75%	46.40%	\$1,485,929	\$1,164,008	1.78	< .05 †
TOTAL	\$3,202,189	100.00%	100.00%	\$3,202,189			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$53,199	1.66%	11.24%	\$359,867	-\$306,668	0.15	< .05 *
Minority Males	\$155,501	4.86%	22.22%	\$711,466	-\$555,966	0.22	< .05 *
Caucasian Females	\$343,552	10.73%	20.14%	\$644,926	-\$301,375	0.53	< .05 *
Caucasian Males	\$2,649,937	82.75%	46.40%	\$1,485,929	\$1,164,008	1.78	< .05 †
TOTAL	\$3,202,189	100.00%	100.00%	\$3,202,189			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$208,700	6.52%	33.46%	\$1,071,334	-\$862,634	0.19	< .05 *
Women Business Enterprises	\$343,552	10.73%	20.14%	\$644,926	-\$301,375	0.53	< .05 *
Minority and Women Business Enterprises	\$552,252	17.25%	53.60%	\$1,716,260	-\$1,164,008	0.32	< .05 *
Caucasian Male Business Enterprises	\$2,649,937	82.75%	46.40%	\$1,485,929	\$1,164,008	1.78	< .05 †

(*) denotes a statistically significant underutilization.

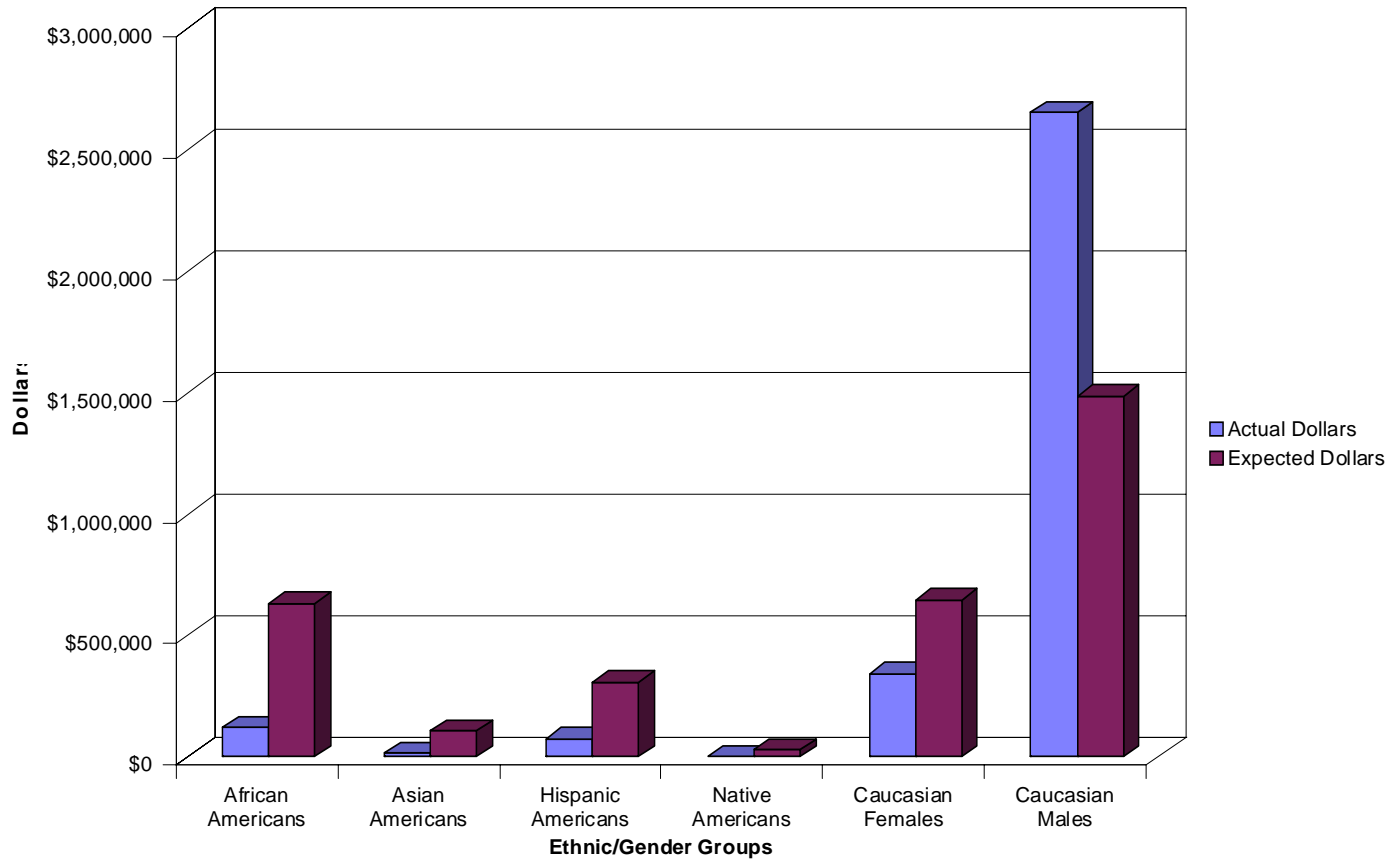
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.09 Disparity Analysis: Non-Professional Services Contracts \$25,000 and under, October 1, 2002 to September 30, 2007



5. Goods Contracts \$25,000 and under

The disparity analysis of all goods contracts \$25,000 and under is depicted in Table 6.10 and Chart 6.10.

African American Businesses represent 13.09 percent of the available goods firms and received 5.36 percent of the dollars for goods contracts \$25,000 and under. This underutilization is statistically significant.

Asian American Businesses represent 4.4 percent of the available goods firms and received 3.25 percent of the dollars for goods contracts \$25,000 and under. This underutilization is statistically significant.

Hispanic American Businesses represent 7.47 percent of the available goods firms and received 5.33 of the dollars for goods contracts \$25,000 and under. This underutilization is statistically significant.

Native American Businesses represent 1.61 percent of the available goods services firms and received 3.8 percent of the dollars for goods contracts \$25,000 and under. This study does not test statistically the overutilization of minority groups.

Minority Business Enterprises represent 26.57 percent of the available goods firms and received 17.75 percent of the dollars for goods contracts \$25,000 and under. This underutilization is statistically significant.

Women Business Enterprises represent 20.15 percent of the available goods firms and received 12.37 percent of the dollars for goods contracts \$25,000 and under. This underutilization is statistically significant.

Minority and Women Business Enterprises represent 46.71 percent of the available goods firms and received 30.11 percent of the dollars for goods contracts \$25,000 and under. This underutilization is statistically significant.

Caucasian Male Business Enterprises represent 53.29 percent of the available goods firms and received 69.89 percent of the dollars for goods contracts \$25,000 and under. This study does not test statistically the overutilization of Caucasian males.



Table 6.10 Disparity Analysis: Goods Contracts \$25,000 and under, October 1, 2002 to September 30, 2007

Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$398,849	5.36%	13.09%	\$973,424	-\$574,575	0.41	< .05 *
Asian Americans	\$241,945	3.25%	4.40%	\$326,961	-\$85,016	0.74	< .05 *
Hispanic Americans	\$396,479	5.33%	7.47%	\$555,709	-\$159,230	0.71	< .05 *
Native Americans	\$282,180	3.80%	1.61%	\$119,347	\$162,833	2.36	**
Caucasian Females	\$919,740	12.37%	20.15%	\$1,498,053	-\$578,313	0.61	< .05 *
Caucasian Males	\$5,196,372	69.89%	53.29%	\$3,962,071	\$1,234,301	1.31	< .05 †
TOTAL	\$7,435,565	100.00%	100.00%	\$7,435,565			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$196,419	2.64%	4.83%	\$359,284	-\$162,865	0.55	< .05 *
African American Males	\$202,429	2.72%	8.26%	\$614,140	-\$411,710	0.33	< .05 *
Asian American Females	\$125,096	1.68%	1.40%	\$104,429	\$20,667	1.20	**
Asian American Males	\$116,849	1.57%	2.99%	\$222,532	-\$105,683	0.53	< .05 *
Hispanic American Females	\$119,169	1.60%	2.36%	\$175,291	-\$56,122	0.68	not significant
Hispanic American Males	\$277,311	3.73%	5.12%	\$380,418	-\$103,108	0.73	< .05 *
Native American Females	\$9,622	0.13%	0.60%	\$44,755	-\$35,133	0.21	----
Native American Males	\$272,558	3.67%	1.00%	\$74,592	\$197,966	3.65	**
Caucasian Females	\$919,740	12.37%	20.15%	\$1,498,053	-\$578,313	0.61	< .05 *
Caucasian Males	\$5,196,372	69.89%	53.29%	\$3,962,071	\$1,234,301	1.31	< .05 †
TOTAL	\$7,435,565	100.00%	100.00%	\$7,435,565			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$450,306	6.06%	9.20%	\$683,759	-\$233,453	0.66	< .05 *
Minority Males	\$869,147	11.69%	17.37%	\$1,291,682	-\$422,535	0.67	< .05 *
Caucasian Females	\$919,740	12.37%	20.15%	\$1,498,053	-\$578,313	0.61	< .05 *
Caucasian Males	\$5,196,372	69.89%	53.29%	\$3,962,071	\$1,234,301	1.31	< .05 †
TOTAL	\$7,435,565	100.00%	100.00%	\$7,435,565			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$1,319,453	17.75%	26.57%	\$1,975,441	-\$655,988	0.67	< .05 *
Women Business Enterprises	\$919,740	12.37%	20.15%	\$1,498,053	-\$578,313	0.61	< .05 *
Minority and Women Business Enterprises	\$2,239,194	30.11%	46.71%	\$3,473,494	-\$1,234,301	0.64	< .05 *
Caucasian Male Business Enterprises	\$5,196,372	69.89%	53.29%	\$3,962,071	\$1,234,301	1.31	< .05 †

(*) denotes a statistically significant underutilization.

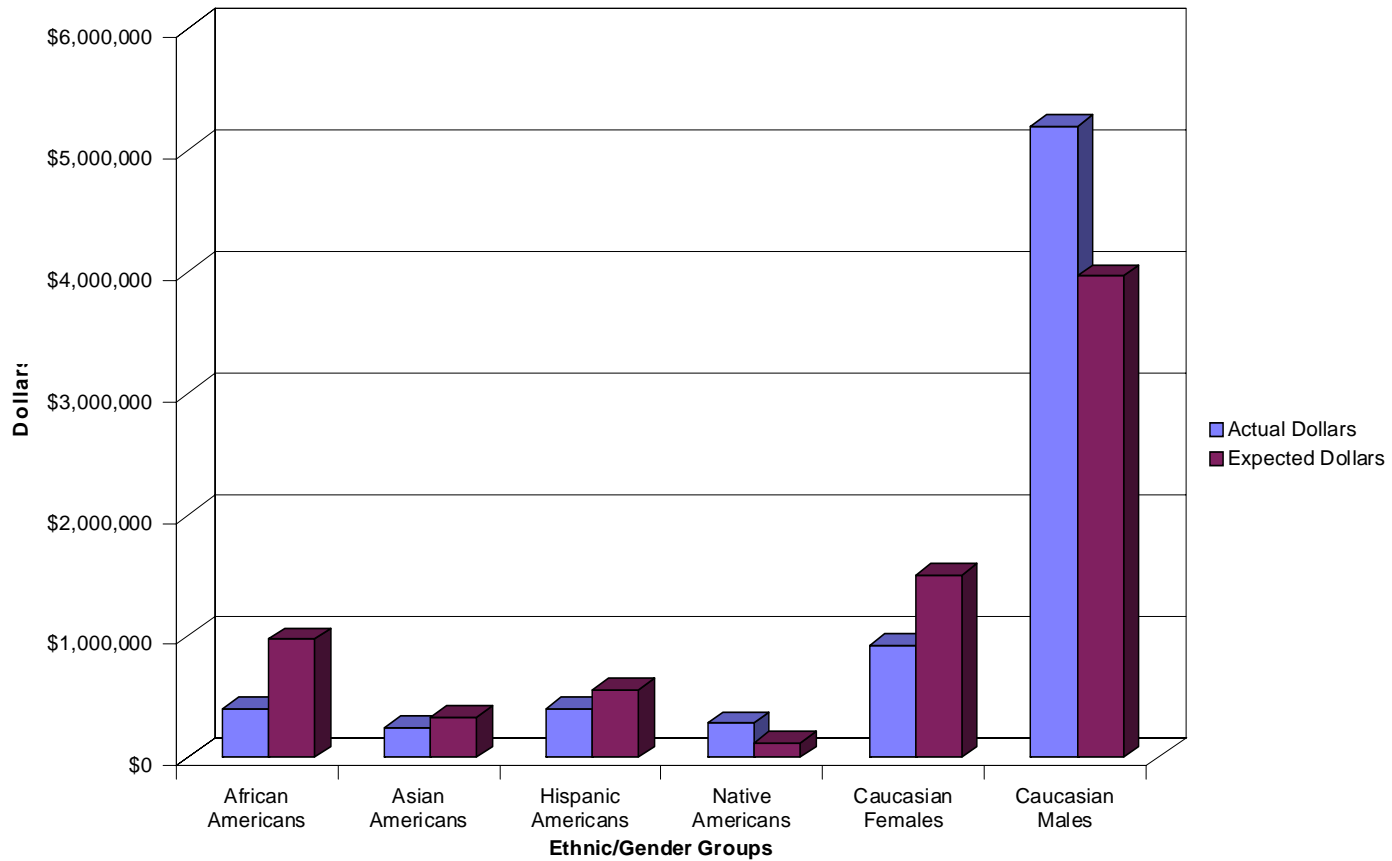
(†) denotes a statistically significant overutilization.

(**) this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 6.10 Disparity Analysis: Goods Contracts \$25,000 and under, October 1, 2002 to September 30, 2007



III. SUMMARY

A. Construction Contracts

As indicated in Table 6.11, African American construction contractors were determined to be underutilized at a statistically significant level at the formal contract level.

Table 6.11 Disparity Summary: Construction Contract Dollars, October 1, 2002 to September 30, 2007

Ethnicity/Gender	Construction	
	Contracts under \$500,000	Contracts \$25,000 and under
African Americans	Yes	No
Asian Americans	No	No
Hispanic Americans	**	**
Native Americans	**	No
Minority Business Enterprises	**	**
Women Business Enterprises	No	No
Minority and Women Business Enterprises	No	No

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.



B. Architecture and Engineering Contracts

As indicated in Table 6.12, there was no statistically significant disparity found for any of the minority groups or Women Business Enterprises in architecture and engineering at the formal or informal contract levels. At the informal contract level, African American, Asian American, Hispanic Americans, and Native Americans were each underutilized although not at a statistically significant level. When the minority groups and the women business group are combined, there was a finding of statistically significant disparity.

Table 6.12 Disparity Summary: Architecture and Engineering Contract Dollars, October 1, 2002 to September 30, 2007

Ethnicity/Gender	Architecture and Engineering	
	Contracts under \$500,000	Contracts \$40,000 and under
African Americans	No	No
Asian Americans	No	No
Hispanic Americans	No	No
Native Americans	No	No
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	No	**
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.



C. Professional Services Contracts

As indicated in Table 6.13, African American, and Asian American Business Enterprises professional services contractors were determined to be underutilized at a statistically significant level at both the informal and formal contract levels. Hispanic Americans were underutilized at a statistically significant level at informal contract level. Women Business Enterprises were underutilized at a statistically significant level at both the informal and formal contract levels.

Table 6.13 Disparity Summary: Professional Services Contract Dollars, October 1, 2002 to September 30, 2007

Ethnicity/Gender	Professional Services	
	Contracts under \$500,000	Contracts \$40,000 and under
African Americans	Yes	Yes
Asian Americans	Yes	Yes
Hispanic Americans	**	Yes
Native Americans	**	No
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	Yes
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.



D. Non-Professional Services Contracts

As indicated in Table 6.14, African American and Hispanic American non-professional services contractors were determined to be underutilized at a statistically significant level at both the informal and formal contract levels. Asian Americans were underutilized at a statistically significant level at the informal contract level. Women Business Enterprises were underutilized at a statistically significant level at both the informal and formal contract levels.

Table 6.14 Disparity Summary: Non-Professional Services Contract Dollars, October 1, 2002 to September 30, 2007

Ethnicity/Gender	Non-Professional Services	
	Contracts under \$500,000	Contracts \$25,000 and under
African Americans	Yes	Yes
Asian Americans	**	Yes
Hispanic Americans	Yes	Yes
Native Americans	**	---
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	Yes
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.

--- = There were insufficient records to determine statistical disparity.



E. Goods Contracts

As indicated in Table 6.15, African American and Hispanic American goods contractors were determined to be underutilized at a statistically significant level at both the informal and formal contract levels. Asian Americans were underutilized at a statistically significant level at the informal contract level. Women Business Enterprises were underutilized at a statistically significant level at both the informal and formal contract levels.

**Table 6.15 Disparity Summary: Goods Contract Dollars,
October 1, 2002 to September 30, 2007**

Ethnicity/Gender	Goods	
	Contracts under \$500,000	Contracts \$25,000 and under
African Americans	Yes	Yes
Asian Americans	No	Yes
Hispanic Americans	Yes	Yes
Native Americans	**	**
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	Yes
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.





7

SUBCONTRACTOR DISPARITY ANALYSIS

I. INTRODUCTION

The objective of this analysis is to determine if minority and woman-owned business enterprise (M/WBE) subcontractors were underutilized at a statistically significant level. A detailed discussion of the statistical procedures for conducting a disparity analysis is set forth in *Chapter 6: Prime Contractor Disparity Analysis*. The same analytical procedures were used to perform the subcontractor disparity analysis. Under a fair and equitable system of awarding subcontracts, the proportion of subcontracts and subcontract dollars awarded to M/WBEs should be approximate to the proportion of available M/WBEs in the relevant market area. If the proportions are not approximate and a disparity exists between these proportions, the probability that the disparity is due to chance can be determined using a statistical test. If there is a low probability that the disparity is due to chance, *Croscon* states that an inference of discrimination can be made.¹

II. DISPARITY ANALYSIS OVERVIEW

As detailed in *Chapter 3: Subcontractor Utilization Analysis*, extensive efforts were undertaken to obtain subcontracting records for DFW's construction, architecture and engineering, professional services, and non-professional services contracts. The goods industry was not available and therefore not included in the subcontractor analysis.

¹ When conducting statistical tests, a level of confidence must be established as a gauge for the level of certainty that an observed occurrence is not due to chance. It is important to note that a 100 percent confidence level or a level of absolute certainty can never be obtained in statistics. A 95 percent confidence level is considered by the courts as an acceptable level in determining whether an inference of discrimination can be made. Thus the data analyzed here was done within the 95 percent confidence level.



III. DISPARITY ANALYSIS

A. Construction Subcontractor Disparity Analysis: October 1, 2002 and September 30, 2007.

The disparity analysis of construction subcontract dollars is depicted in Table 7.01 and Chart 7.01. These ethnic and gender groups are defined in Table 2.01 of *Chapter 2: Prime Contractor Utilization Analysis*.

African American Businesses represent 18.08 percent of the available construction firms and received 10.24 percent of the construction subcontract dollars. This underutilization is statistically significant.

Asian American Businesses represent 3.14 percent of the available construction firms and received 1.16 percent of the construction subcontract dollars. This underutilization is statistically significant.

Hispanic American Businesses represent 17.31 percent of the available construction firms and received 10.23 percent of the construction subcontract dollars. This underutilization is not statistically significant.

Native American Businesses represent 2 percent of the available construction firms and received 0.89 percent of the construction subcontract dollars. This underutilization is not statistically significant.

Minority Business Enterprises represent 40.52 percent of the available construction firms and received 22.52 percent of the construction subcontract dollars. This underutilization is statistically significant.

Women Business Enterprises represent 18 percent of the available construction firms and received 21.74 percent of the construction subcontract dollars. This study does not test statistically the overutilization of women business groups.

Minority and Women Business Enterprises represent 58.52 percent of the available construction firms and received 44.26 percent of the construction subcontract dollars. This underutilization is not statistically significant.

Caucasian Male Business Enterprises represent 41.48 percent of the available construction firms and received 55.74 percent of the construction subcontract dollars. This overutilization is not statistically significant.



Table 7.01 Disparity Analysis: Construction Subcontracts, October 1, 2002 to September 30, 2007

Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$21,183,761	10.24%	18.08%	\$37,402,486	-\$16,218,725	0.57	< .05 *
Asian Americans	\$2,399,479	1.16%	3.14%	\$6,486,467	-\$4,086,988	0.37	< .05 *
Hispanic Americans	\$21,161,182	10.23%	17.31%	\$35,801,929	-\$14,640,747	0.59	not significant
Native Americans	\$1,835,054	0.89%	2.00%	\$4,127,752	-\$2,292,698	0.44	not significant
Caucasian Females	\$44,970,676	21.74%	18.00%	\$37,234,006	\$7,736,669	1.21	**
Caucasian Males	\$115,300,759	55.74%	41.48%	\$85,798,271	\$29,502,489	1.34	not significant
TOTAL	\$206,850,911	100.00%	100.00%	\$206,850,911			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$900,012	0.44%	3.79%	\$7,834,305	-\$6,934,292	0.11	< .05 *
African American Males	\$20,283,749	9.81%	14.29%	\$29,568,182	-\$9,284,433	0.69	not significant
Asian American Females	\$0	0.00%	0.73%	\$1,516,317	-\$1,516,317	0.00	----
Asian American Males	\$2,399,479	1.16%	2.40%	\$4,970,150	-\$2,570,671	0.48	not significant
Hispanic American Females	\$2,698,048	1.30%	3.34%	\$6,907,666	-\$4,209,618	0.39	not significant
Hispanic American Males	\$18,463,134	8.93%	13.97%	\$28,894,263	-\$10,431,129	0.64	not significant
Native American Females	\$90,591	0.04%	0.63%	\$1,305,717	-\$1,215,127	0.07	----
Native American Males	\$1,744,464	0.84%	1.36%	\$2,822,034	-\$1,077,571	0.62	not significant
Caucasian Females	\$44,970,676	21.74%	18.00%	\$37,234,006	\$7,736,669	1.21	**
Caucasian Males	\$115,300,759	55.74%	41.48%	\$85,798,271	\$29,502,489	1.34	not significant
TOTAL	\$206,850,911	100.00%	100.00%	\$206,850,911			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$3,688,651	1.78%	8.49%	\$17,564,005	-\$13,875,354	0.21	< .05 *
Minority Males	\$42,890,825	20.74%	32.03%	\$66,254,629	-\$23,363,804	0.65	not significant
Caucasian Females	\$44,970,676	21.74%	18.00%	\$37,234,006	\$7,736,669	1.21	**
Caucasian Males	\$115,300,759	55.74%	41.48%	\$85,798,271	\$29,502,489	1.34	not significant
TOTAL	\$206,850,911	100.00%	100.00%	\$206,850,911			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$46,579,477	22.52%	40.52%	\$83,818,634	-\$37,239,158	0.56	< .05 *
Women Business Enterprises	\$44,970,676	21.74%	18.00%	\$37,234,006	\$7,736,669	1.21	**
Minority and Women Business Enterprises	\$91,550,152	44.26%	58.52%	\$121,052,641	-\$29,502,489	0.76	not significant
Caucasian Male Business Enterprises	\$115,300,759	55.74%	41.48%	\$85,798,271	\$29,502,489	1.34	not significant

(*) denotes a statistically significant underutilization.

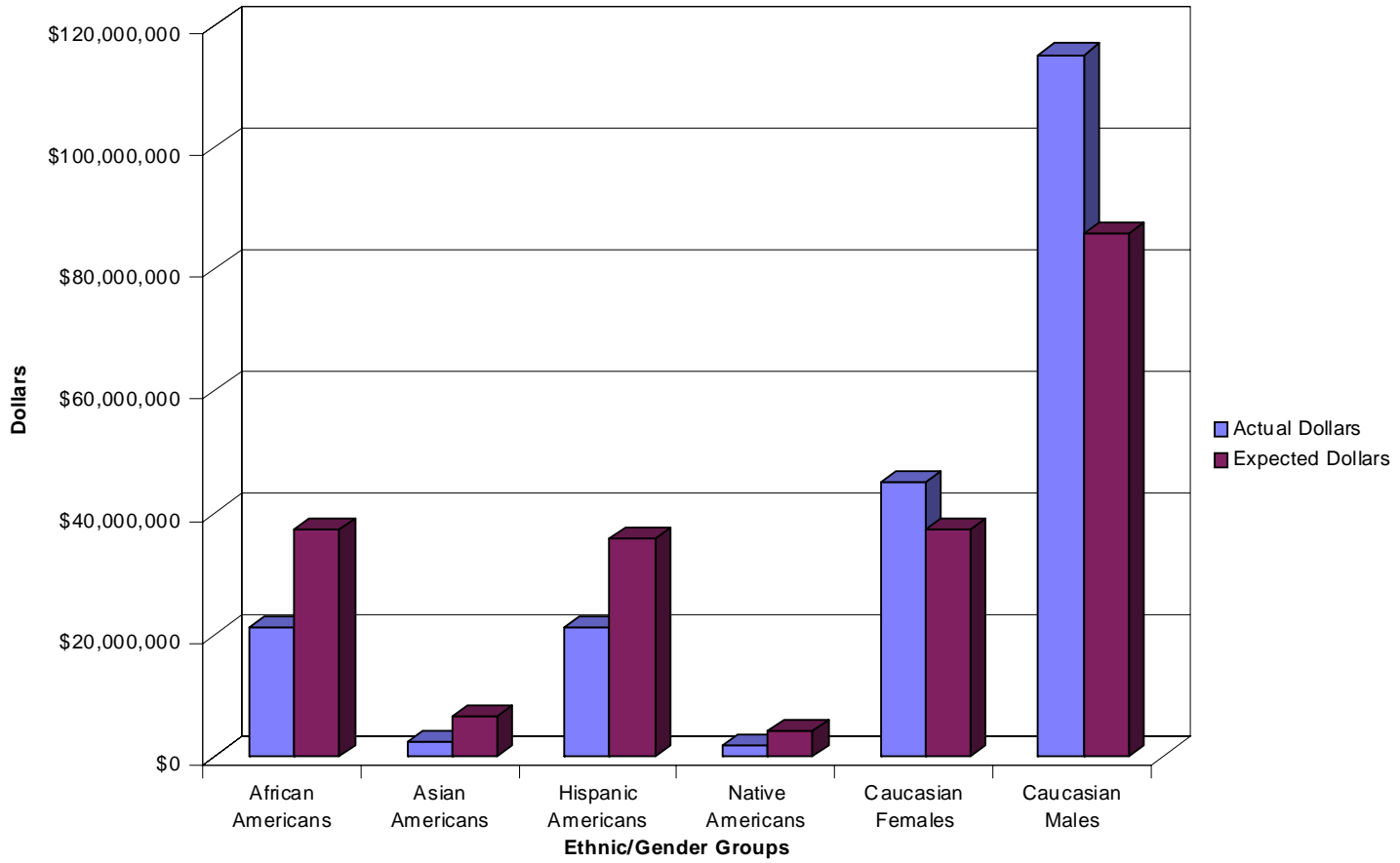
(+) denotes a statistically significant overutilization.

(**) denotes that this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 7.01 Disparity Analysis: Construction Subcontracts, October 1, 2002 to September 30, 2007



B. Architecture and Engineering Subcontractor Analysis: October 1, 2002 to September 30, 2007

The disparity analysis of architecture and engineering subcontract dollars is depicted in Table 7.02 and Chart 7.02.

African American Businesses represent 13.48 percent of the available architecture and engineering firms and received 18.78 percent of the architecture and engineering subcontract dollars. This study does not test statistically the overutilization of minority business groups.

Asian American Businesses represent 7.69 percent of the available architecture and engineering firms and received 9.71 percent of the architecture and engineering subcontract dollars. This study does not test statistically the overutilization of minority business groups.

Hispanic American Businesses represent 11.39 percent of the available architecture and engineering firms and received 12.55 percent of the architecture and engineering subcontract dollars. This study does not test statistically the overutilization of minority business groups.

Native American Businesses represent 1.33 percent of the available architecture and engineering firms and received 1.9 percent of the architecture and engineering subcontract dollars. This study does not test statistically the overutilization of minority business groups.

Minority Business Enterprises represent 33.89 percent of the available architecture and engineering firms and received 42.94 percent of the architecture and engineering subcontract dollars. This study does not test statistically the overutilization of minority business groups.

Women Business Enterprises represent 19.72 percent of the available architecture and engineering firms and received 11.8 percent of the architecture and engineering subcontract dollars. This underutilization is not statistically significant.

Minority and Women Business Enterprises represent 53.61 percent of the available architecture and engineering firms and received 54.74 percent of the architecture and engineering subcontract dollars. This study does not test statistically the overutilization of minority and women business groups.

Caucasian Male Business Enterprises represent 46.39 percent of the available architecture and engineering firms and received 45.26 percent of the architecture and engineering subcontract dollars. This study does not test statistically the underutilization of Caucasian Males.



Table 7.02 Disparity Analysis: Architecture and Engineering Subcontracts, October 1, 2002 to September 30, 2007

Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$7,342,919	18.78%	13.48%	\$5,270,380	\$2,072,539	1.39	**
Asian Americans	\$3,798,186	9.71%	7.69%	\$3,008,414	\$789,772	1.26	**
Hispanic Americans	\$4,907,378	12.55%	11.39%	\$4,456,072	\$451,306	1.10	**
Native Americans	\$744,404	1.90%	1.33%	\$520,252	\$224,152	1.43	**
Caucasian Females	\$4,616,461	11.80%	19.72%	\$7,713,302	-\$3,096,841	0.60	not significant
Caucasian Males	\$17,700,035	45.26%	46.39%	\$18,140,963	-\$440,928	0.98	**
TOTAL	\$39,109,383	100.00%	100.00%	\$39,109,383			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$792,283	2.03%	2.66%	\$1,040,504	-\$248,221	0.76	not significant
African American Males	\$6,550,635	16.75%	10.82%	\$4,229,875	\$2,320,760	1.55	**
Asian American Females	\$32,772	0.08%	1.74%	\$678,590	-\$645,818	0.05	not significant
Asian American Males	\$3,765,414	9.63%	5.96%	\$2,329,824	\$1,435,590	1.62	**
Hispanic American Females	\$781,772	2.00%	2.20%	\$859,547	-\$77,775	0.91	not significant
Hispanic American Males	\$4,125,606	10.55%	9.20%	\$3,596,525	\$529,081	1.15	**
Native American Females	\$715,457	1.83%	0.46%	\$180,957	\$534,499	3.95	**
Native American Males	\$28,947	0.07%	0.87%	\$339,295	-\$310,347	0.09	---
Caucasian Females	\$4,616,461	11.80%	19.72%	\$7,713,302	-\$3,096,841	0.60	not significant
Caucasian Males	\$17,700,035	45.26%	46.39%	\$18,140,963	-\$440,928	0.98	**
TOTAL	\$39,109,383	100.00%	100.00%	\$39,109,383			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$2,322,283	5.94%	7.06%	\$2,759,598	-\$437,315	0.84	not significant
Minority Males	\$14,470,603	37.00%	26.84%	\$10,495,520	\$3,975,083	1.38	**
Caucasian Females	\$4,616,461	11.80%	19.72%	\$7,713,302	-\$3,096,841	0.60	not significant
Caucasian Males	\$17,700,035	45.26%	46.39%	\$18,140,963	-\$440,928	0.98	**
TOTAL	\$39,109,383	100.00%	100.00%	\$39,109,383			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$16,792,886	42.94%	33.89%	\$13,255,118	\$3,537,769	1.27	**
Women Business Enterprises	\$4,616,461	11.80%	19.72%	\$7,713,302	-\$3,096,841	0.60	not significant
Minority and Women Business Enterprises	\$21,409,348	54.74%	53.61%	\$20,968,420	\$440,928	1.02	**
Caucasian Male Business Enterprises	\$17,700,035	45.26%	46.39%	\$18,140,963	-\$440,928	0.98	**

(*) denotes a statistically significant underutilization.

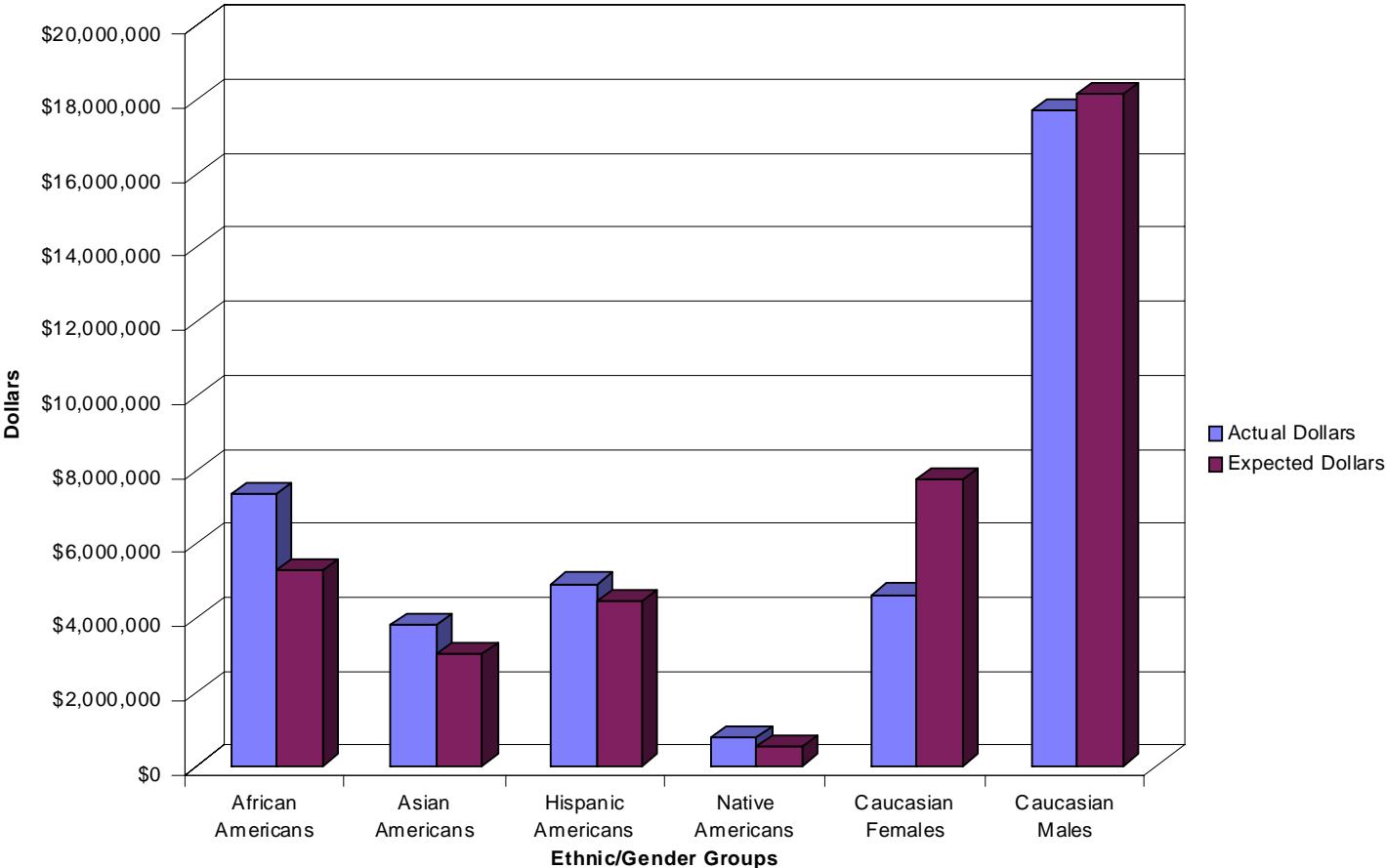
(†) denotes a statistically significant overutilization.

(**) denotes that this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 7.02 Disparity Analysis: Architecture and Engineering Subcontracts, October 1, 2002 to September 30, 2007



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 Dallas/Fort Worth International Airport Board Availability and Disparity Study

C. Professional Services Subcontractor Analysis: October 1, 2002 to September 30, 2007

The disparity analysis of professional services subcontract dollars is depicted in Table 7.03 and Chart 7.03.

African American Businesses represent 20.41 percent of the available professional services firms and received 16.85 percent of the professional services subcontract dollars. This underutilization is not statistically significant.

Asian American Businesses represent 6.38 percent of the available professional services firms and received 14.46 percent of the professional services subcontract dollars. This study does not test statistically the overutilization of minority business groups.

Hispanic American Businesses represent 9.09 percent of the available professional services firms and received 42.71 percent of the professional services subcontract dollars. This study does not test statistically the overutilization of minority business groups.

Native American Businesses represent 1.04 percent of the available professional services firms and received 1.89 percent of the professional services subcontract dollars. This study does not test statistically the overutilization of minority business groups.

Minority Business Enterprises represent 36.92 percent of the available professional services firms and received 75.9 percent of the professional services subcontract dollars. This study does not test statistically the overutilization of minority business groups.

Women Business Enterprises represent 25.58 percent of the available professional services firms and received 11.9 percent of the Professional Services subcontract dollars. This underutilization is not statistically significant.

Minority and Women Business Enterprises represent 62.5 percent of the available professional services firms and received 87.8 percent of the professional services subcontract dollars. This study does not test statistically the overutilization of minority and women business groups.

Caucasian Male Business Enterprises represent 37.5 percent of the available professional services firms and received 12.2 percent of the professional services subcontract dollars. This study does not test statistically the underutilization of Caucasian Males.



Table 7.03 Disparity Analysis: Professional Services Subcontracts, October 1, 2002 to September 30, 2007

Ethnicity [^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$289,280	16.85%	20.41%	\$350,556	-\$61,275	0.83	not significant
Asian Americans	\$248,288	14.46%	6.38%	\$109,549	\$138,740	2.27	**
Hispanic Americans	\$733,363	42.71%	9.09%	\$156,107	\$577,256	4.70	**
Native Americans	\$32,375	1.89%	1.04%	\$17,802	\$14,573	1.82	**
Caucasian Females	\$204,292	11.90%	25.58%	\$439,222	-\$234,930	0.47	not significant
Caucasian Males	\$209,577	12.20%	37.50%	\$643,941	-\$434,363	0.33	**
TOTAL	\$1,717,176	100.00%	100.00%	\$1,717,176			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$70,144	4.08%	9.25%	\$158,846	-\$88,701	0.44	not significant
African American Males	\$219,136	12.76%	11.16%	\$191,710	\$27,426	1.14	**
Asian American Females	\$114,525	6.67%	1.99%	\$34,234	\$80,291	3.35	**
Asian American Males	\$133,763	7.79%	4.39%	\$75,315	\$58,448	1.78	**
Hispanic American Females	\$267,126	15.56%	3.07%	\$52,720	\$214,405	5.07	**
Hispanic American Males	\$466,237	27.15%	6.02%	\$103,387	\$362,851	4.51	**
Native American Females	\$0	0.00%	0.40%	\$6,847	-\$6,847	0.00	----
Native American Males	\$32,375	1.89%	0.64%	\$10,955	\$21,420	2.96	**
Caucasian Females	\$204,292	11.90%	25.58%	\$439,222	-\$234,930	0.47	not significant
Caucasian Males	\$209,577	12.20%	37.50%	\$643,941	-\$434,363	0.33	**
TOTAL	\$1,717,176	100.00%	100.00%	\$1,717,176			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$451,795	26.31%	14.71%	\$252,647	\$199,148	1.79	**
Minority Males	\$851,511	49.59%	22.21%	\$381,366	\$470,145	2.23	**
Caucasian Females	\$204,292	11.90%	25.58%	\$439,222	-\$234,930	0.47	not significant
Caucasian Males	\$209,577	12.20%	37.50%	\$643,941	-\$434,363	0.33	**
TOTAL	\$1,717,176	100.00%	100.00%	\$1,717,176			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$1,303,306	75.90%	36.92%	\$634,013	\$669,293	2.06	**
Women Business Enterprises	\$204,292	11.90%	25.58%	\$439,222	-\$234,930	0.47	not significant
Minority and Women Business Enterprises	\$1,507,598	87.80%	62.50%	\$1,073,235	\$434,363	1.40	**
Caucasian Male Business Enterprises	\$209,577	12.20%	37.50%	\$643,941	-\$434,363	0.33	**

(*) denotes a statistically significant underutilization.

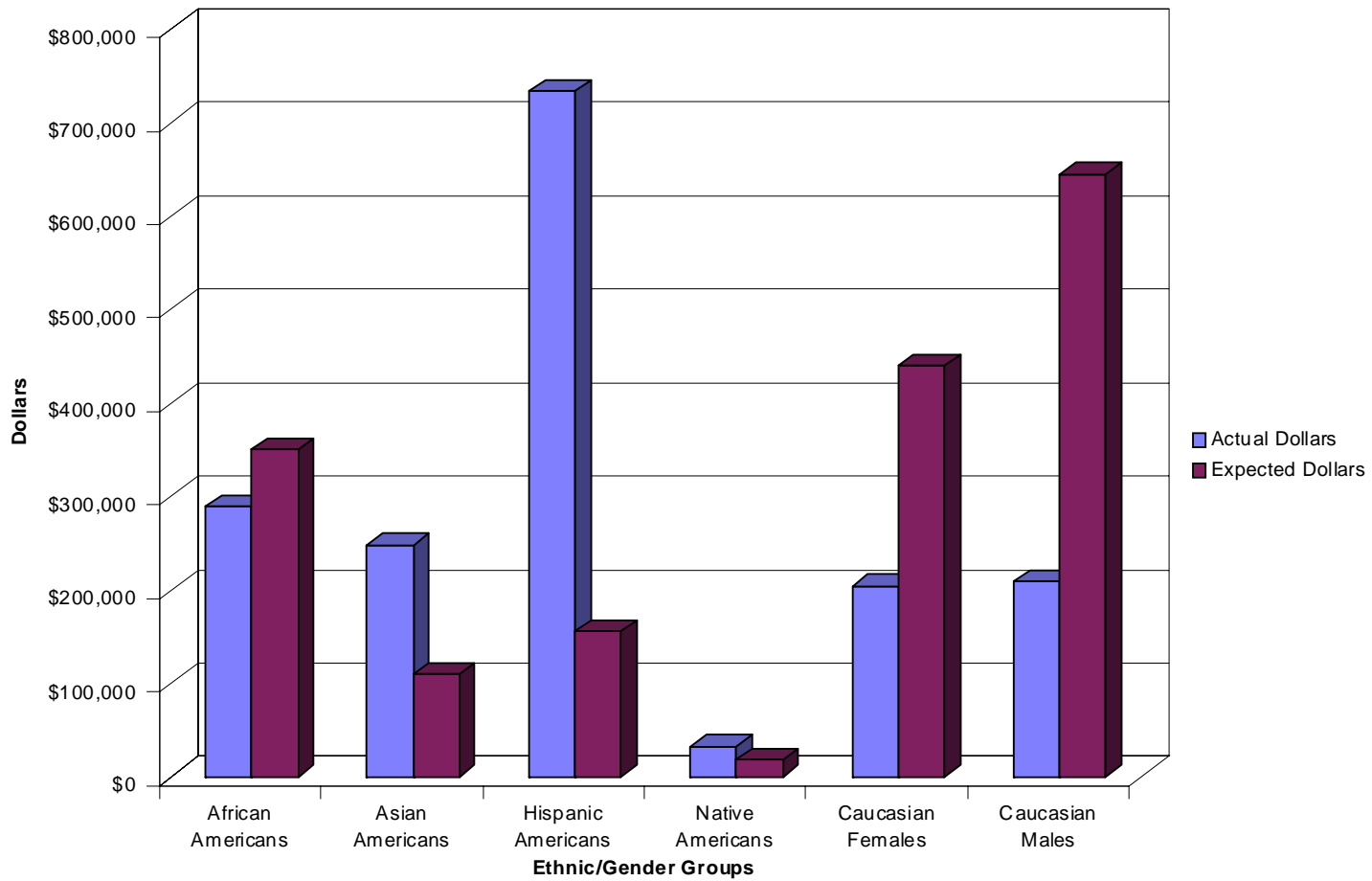
(†) denotes a statistically significant overutilization.

(**) denotes that this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 7.03 Disparity Analysis: Professional Services Subcontracts, October 1, 2002 to September 30, 2007



D. Non-Professional Services Subcontractor Analysis: October 1, 2002 to September 30, 2007

The disparity analysis of non-professional services subcontract dollars is depicted in Table 7.04 and Chart 7.04.

African American Businesses represent 18.92 percent of the available non-professional services firms and received 24.12 percent of the non-professional services subcontract dollars. This study does not test statistically the overutilization of minority business groups.

Asian American Businesses represent 3.93 percent of the available non-professional services firms and received 13.78 percent of the non-professional services subcontract dollars. This study does not test statistically the overutilization of minority business groups.

Hispanic American Businesses represent 11.14 percent of the available non-professional services firms and received 9.06 percent of the non-professional services subcontract dollars. This underutilization is not statistically significant.

Native American Businesses represent 1.24 percent of the available non-professional services firms and received 0.53 percent of the non-professional services subcontract dollars. This underutilization is not statistically significant.

Minority Business Enterprises represent 35.23 percent of the available non-professional services firms and received 47.49 percent of the non-professional services subcontract dollars. This study does not test statistically the overutilization of minority business groups.

Women Business Enterprises represent 20.12 percent of the available non-professional services firms and received 9.22 percent of the Non-professional Services subcontract dollars. This underutilization is not statistically significant.

Minority and Women Business Enterprises represent 55.35 percent of the available non-professional services firms and received 56.71 percent of the non-professional services subcontract dollars. This study does not test statistically the overutilization of minority and women business groups.

Caucasian Male Business Enterprises represent 44.65 percent of the available non-professional services firms and received 43.29 percent of the non-professional services subcontract dollars. This study does not test statistically the underutilization of Caucasian Males.



Table 7.04 Disparity Analysis: Non-Professional Services Subcontracts, October 1, 2002 to September 30, 2007

Ethnicity[^]	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African Americans	\$33,823,243	24.12%	18.92%	\$26,534,599	\$7,288,644	1.27	**
Asian Americans	\$19,327,419	13.78%	3.93%	\$5,509,962	\$13,817,458	3.51	**
Hispanic Americans	\$12,709,649	9.06%	11.14%	\$15,621,109	-\$2,911,461	0.81	not significant
Native Americans	\$739,685	0.53%	1.24%	\$1,743,866	-\$1,004,181	0.42	not significant
Caucasian Females	\$12,937,829	9.22%	20.12%	\$28,221,155	-\$15,283,326	0.46	not significant
Caucasian Males	\$60,716,486	43.29%	44.65%	\$62,623,620	-\$1,907,134	0.97	**
TOTAL	\$140,254,311	100.00%	100.00%	\$140,254,311			
Ethnicity and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
African American Females	\$8,127,430	5.79%	6.32%	\$8,866,699	-\$739,268	0.92	not significant
African American Males	\$25,695,813	18.32%	12.60%	\$17,667,901	\$8,027,912	1.45	**
Asian American Females	\$11,011,609	7.85%	1.13%	\$1,588,310	\$9,423,299	6.93	**
Asian American Males	\$8,315,811	5.93%	2.80%	\$3,921,652	\$4,394,159	2.12	**
Hispanic American Females	\$1,481,211	1.06%	2.87%	\$4,019,898	-\$2,538,686	0.37	not significant
Hispanic American Males	\$11,228,437	8.01%	8.27%	\$11,601,212	-\$372,774	0.97	not significant
Native American Females	\$62,475	0.04%	0.46%	\$646,786	-\$584,311	0.10	----
Native American Males	\$677,210	0.48%	0.78%	\$1,097,080	-\$419,870	0.62	----
Caucasian Females	\$12,937,829	9.22%	20.12%	\$28,221,155	-\$15,283,326	0.46	not significant
Caucasian Males	\$60,716,486	43.29%	44.65%	\$62,623,620	-\$1,907,134	0.97	**
TOTAL	\$140,254,311	100.00%	100.00%	\$140,254,311			
Minority and Gender	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Females	\$20,682,726	14.75%	10.78%	\$15,121,692	\$5,561,033	1.37	**
Minority Males	\$45,917,271	32.74%	24.45%	\$34,287,844	\$11,629,427	1.34	**
Caucasian Females	\$12,937,829	9.22%	20.12%	\$28,221,155	-\$15,283,326	0.46	not significant
Caucasian Males	\$60,716,486	43.29%	44.65%	\$62,623,620	-\$1,907,134	0.97	**
TOTAL	\$140,254,311	100.00%	100.00%	\$140,254,311			
Minority and Females	Actual Dollars	Utilization	Availability	Expected Dollars	Dollars Lost	Disp. Ratio	P-Value
Minority Business Enterprises	\$66,599,996	47.49%	35.23%	\$49,409,536	\$17,190,460	1.35	**
Women Business Enterprises	\$12,937,829	9.22%	20.12%	\$28,221,155	-\$15,283,326	0.46	not significant
Minority and Women Business Enterprises	\$79,537,826	56.71%	55.35%	\$77,630,692	\$1,907,134	1.02	**
Caucasian Male Business Enterprises	\$60,716,486	43.29%	44.65%	\$62,623,620	-\$1,907,134	0.97	**

(*) denotes a statistically significant underutilization.

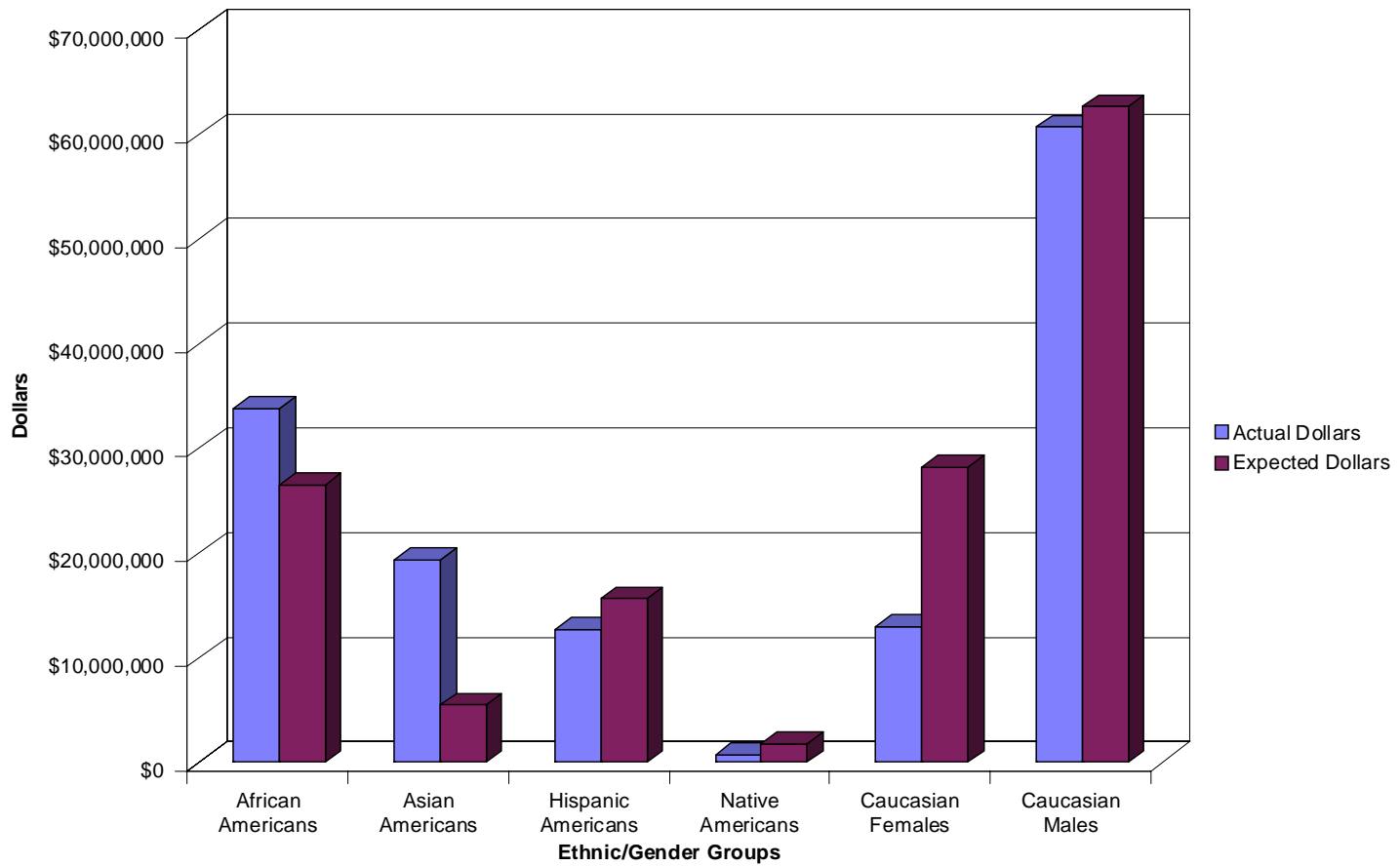
(†) denotes a statistically significant overutilization.

(**) denotes that this study does not test statistically the overutilization of M/WBEs or the underutilization of Caucasian males.

(----) denotes an underutilized group with too few available firms to test statistical significance.

[^] See Chapter 2: Prime Contractor Utilization Analysis, Table 2.01 for a definition of each ethnic and gender group

Chart 7.04 Disparity Analysis: Non-Professional Services Subcontracts, October 1, 2002 to September 30, 2007



IV. SUBCONTRACTOR DISPARITY SUMMARY

The subcontractor disparity findings in the industries under consideration are summarized in Table 7.05 below

As indicated in Table 7.05, construction subcontracts had a statistically significant disparity for African Americans and Asian Americans. Hispanic Americans and Native Americans were underutilized but not at a statistically significant level. No statistically significant disparity was found in architecture and engineering subcontracts for any minority or women business group. However, there was significant underutilization for Women Business Enterprises but not at a statistically significant level.

Statistically significant disparity was not found in professional services or non-professional services subcontracts for any minority or women business group. However, there was significant underutilization for African Americans and Women Business Enterprises in professional services and significant underutilization for Women Business Enterprises in non-professional services but not at a statistically significant level.

Table 7.05 Subcontractor Disparity Summary, October 1, 2002 to September 30, 2007

Ethnicity / Gender	Construction Services	Architecture and Engineering	Professional Services	Non-Professional Services
African Americans	Yes	No	No	No
Asian Americans	Yes	No	No	No
Hispanic Americans	No	No	No	No
Native Americans	No	No	No	No
Minority Business Enterprises	Yes	No	No	No
Women Business Enterprises	No	No	No	No
Minority and Women Business Enterprises	No	No	No	No

Yes = Statistically significant disparity was found
 No = Statistically significant disparity was not found



8

RECOMMENDATIONS

I. INTRODUCTION

This chapter provides race and gender-specific recommendations for the ethnic and gender groups that had a statistically significant underutilization, as well as race and gender-neutral recommendations for all groups. The race-neutral recommendations include best management practices and an analysis of the Dallas/Fort Worth International Airport Board's (DFW) Procurement and Materials Management Policy Manual. The statistical analysis was a review of contracts awarded during the October 1, 2002 through September 30, 2007 study period for construction, architecture and engineering, professional services, non-professional services, and goods.

This chapter is organized into seven sections. The first is an *introduction*, the second section, *Disparity Findings*, presents the statistical disparity analysis. *A Review of DFW's DBE Program* is presented in section three. *A Review of DFW's M/WBE Program* is presented in section four. Race and gender-conscious recommendations are provided in section five, and *Race-Conscious Remedies* in Section six. Finally *Administrative Recommendations* are presented in section seven.

II. DISPARITY FINDINGS

The statistical analysis of M/WBE utilization is a key component of the Study. The objective of the analysis was to determine if M/WBE contractors were utilized at the level they were available in DFW's market area. Where an ethnic or gender group was underutilized and the underutilization was statistically significant, the finding constituted a disparity. Race and gender-specific recommendations are proposed where there was a disparity.

The findings are presented by ethnicity and gender within each industry and at two thresholds. One threshold is the informal contract level, which for construction, non-



professional services, and goods was \$25,000 and under, and for architecture and engineering and professional services the level was \$40,000 and under. The disparity analysis of the formal contracts was limited to contracts valued under \$500,000.

A. Prime Contracts

As depicted in Table 8.01 below, DFW issued 4,856 contracts and purchase orders¹ during the October 1, 2002 to September 30, 2007 study period. Both contracts and purchase orders are referred to in this report as contracts. The 4,856 contracts included 118 for construction, 41 for architecture and engineering, 174 for professional services, 735 for non-professional services, and 3,788 for goods.

The payments made by DFW during the study period totaled \$995,804,354 for all 4,856 contracts. The payments included \$392,436,277 for construction, \$69,427,262 for architecture and engineering, \$25,638,325 for professional services, \$434,413,844 for non-professional services, and \$73,888,646 for goods. The statistical analysis of disparity for each industry, as noted above, was limited to prime contracts valued under \$500,000.

Table 8.01 Total Prime Contracts and Dollars Expended: All Industries, October 1, 2002 to September 30, 2007

Industry	Total Number of Contracts	Total Dollars Expended
Construction	118	\$392,436,277
Architecture and Engineering	41	\$69,427,262
Professional Services	174	\$25,638,325
Non-Professional Services	735	\$434,413,844
Goods	3,788	\$73,888,646
Total Expenditures	4,856	\$995,804,354



¹ These transactions are referred to as contracts in this study.

B. Subcontracts

A total of 1,449 subcontracts were identified for 193 construction, architecture and engineering, professional services, and non-professional services prime contracts valued at \$50,000 and more. The 1,449 subcontracts were awarded during the five-year study period, October 1, 2002 to September 30, 2007.

As depicted below in Table 8.02, DFW's 1,449 subcontracts analyzed included 720 construction subcontracts, 309 architecture and engineering subcontracts, 31 professional services subcontracts, and 389 non-professional services subcontracts. The total dollars for subcontracts analyzed were \$387,931,781 with \$206,850,911 for construction subcontracts, \$39,109,383 for architecture and engineering subcontracts, \$1,717,176 for professional services subcontracts, and \$140,254,311 for non-professional services subcontracts.

Table 8.02 Total Subcontract Dollars: All Industries, October 1, 2002 to September 30, 2007

Industry	Total Number of Subcontracts	Total Dollars Expended
Construction	720	\$206,850,911
Architecture and Engineering	309	\$39,109,383
Professional Services	31	\$1,717,176
Non-Professional Services	389	\$140,254,311
Total	1,449	\$387,931,781



C. Prime Contractor Disparity Findings

1. Construction Contracts

As indicated in Table 8.03, African American construction contractors were determined to be underutilized at the formal contract level.

Table 8.03 Disparity Summary: Construction Contract Dollars, October 1, 2002 to September 30, 2007

Ethnicity/Gender	Construction	
	Contracts under \$500,000	Contracts \$25,000 and under
African Americans	Yes	No
Asian Americans	No	No
Hispanic Americans	**	**
Native Americans	**	No
Minority Business Enterprises	**	**
Women Business Enterprises	No	No
Minority and Women Business Enterprises	No	No

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.



2. Architecture and Engineering Contracts

As indicated in Table 8.04, there was no statistically significant disparity found for any minority groups or for Women Business Enterprises contractors in architecture and engineering at the formal or informal contract levels.

**Table 8.04 Disparity Summary: Architecture and Engineering
Contract Dollars, October 1, 2002 to September 30, 2007**

Ethnicity/Gender	Architecture and Engineering	
	Contracts under \$500,000	Contracts \$40,000 and under
African Americans	No	No
Asian Americans	No	No
Hispanic Americans	No	No
Native Americans	No	No
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	No	**
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.

--- = There were insufficient records to determine statistical disparity.



3. Professional Services Contracts

As indicated in Table 8.05, African American, and Asian American Business Enterprises professional services contractors were determined to be underutilized at a statistically significant level on both informal and formal contracts. Hispanic Americans were underutilized at a statistically significant level at informal contracts. Women Business Enterprises were underutilized at a significantly significant level on both the informal and formal contracts.

**Table 8.05 Disparity Summary: Professional Services
Contract Dollars, October 1, 2002 to September 30, 2007**

Ethnicity/Gender	Professional Services	
	Contracts under \$500,000	Contracts \$40,000 and under
African Americans	Yes	Yes
Asian Americans	Yes	Yes
Hispanic Americans	**	Yes
Native Americans	**	No
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	Yes
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.

--- = There were insufficient records to determine statistical disparity.



4. Non-Professional Services Contracts

As indicated in Table 8.06, African American, Hispanic American, and Women Business Enterprises non-professional services contractors were determined to be underutilized at a statistically significant level on both informal and formal contracts. Asian Americans were underutilized at a statistically significant level on informal contracts.

Table 8.06 Disparity Summary: Non-Professional Services Contract Dollars, October 1, 2002 to September 30, 2007

Ethnicity/Gender	Non-Professional Services	
	Contracts under \$500,000	Contracts \$25,000 and under
African Americans	Yes	Yes
Asian Americans	**	Yes
Hispanic Americans	Yes	Yes
Native Americans	**	---
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	Yes
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.

--- = There were insufficient records to determine statistical disparity.



5. Goods Contracts

As indicated in Table 8.07, African American and Hispanic American Business Enterprises goods contractors were determined to be underutilized at a statistically significant level on both the informal and formal contract levels. Asian Americans were underutilized at a statistically significant level on informal contracts. Women Business Enterprises were underutilized at a significantly significant level on both the informal and formal contracts.

**Table 8.07 Disparity Summary: Goods Contract Dollars
October 1, 2002 to September 30, 2007**

Ethnicity/Gender	Goods	
	Contracts under \$500,000	Contracts \$25,000 and under
African Americans	Yes	Yes
Asian Americans	No	Yes
Hispanic Americans	Yes	Yes
Native Americans	**	**
Minority Business Enterprises	Yes	Yes
Women Business Enterprises	Yes	Yes
Minority and Women Business Enterprises	Yes	Yes

Yes = Statistically significant disparity was found.

No = Statistically significant disparity was not found.



D. Subcontractor Disparity Findings

As indicated in Table 8.08 below, African American and Asian American construction subcontractors were determined to be underutilized at a statistically significant level. Hispanic American and Native American construction subcontractors were underutilized but not at a statistically significant level.

There was no statistically significant disparity found for any minority group or for Women Business Enterprises contractors on architecture and engineering, professional services, or non-professional services subcontracts.

Table 8.08 Subcontractor Disparity Summary, October 1, 2002 to September 30, 2007

Ethnicity / Gender	Construction Services	Architecture and Engineering	Professional Services	Non-Professional Services
African Americans	Yes	No	No	No
Asian Americans	Yes	No	No	No
Hispanic Americans	No	No	No	No
Native Americans	No	No	No	No
Minority Business Enterprises	Yes	No	No	No
Women Business Enterprises	No	No	No	No
Minority and Women Business Enterprises	No	No	No	No

Yes = Statistically significant disparity was found

No = Statistically significant disparity was not found



III. DISADVANTAGED BUSINESS ENTERPRISE PROGRAM REVIEW

As a condition of receiving federal assistance, DFW's DBE Program has been established in accordance with the U.S. Department of Transportation (USDOT) regulations 49 CFR Part 26 and Part 23. DFW's Board of Director's promulgated the DBE Program pursuant to the guidelines set forth in 49 CFR Part 26, State of Texas statutes, and applicable local laws.

1. Disadvantaged Business Enterprise Business Policy

DFW's Disadvantaged Advantaged Business (DBE) Policy has been promulgated to ensure that DBEs have an equal opportunity to receive and participate in DOT-assisted contracts. DFW's DBE program has the following objectives:

- Ensure non-discrimination in the award and administration of DOT-assisted contracts
- Create a level playing field for DBEs to compete fairly for DOT-assisted contracts
- Ensure the DBE Program is narrowly tailored in accordance with applicable law
- Ensure that only firms that meet 49 CFR Part 26 eligibility standards are permitted to participate as DBEs
- Remove barriers to the participation of DBEs in DOT-assisted contracts
- Assist in developing firms which can compete successfully in the market place outside the DBE Program

2. The Disadvantaged Business Enterprise Liaison Officer Responsibilities

DFW's Disadvantaged Business Enterprise Liaison Officer is responsible for implementing all aspects of the DBE program and ensuring compliance with all provisions of 49 CFR Part 26.

The specific duties and responsibilities of the Disadvantaged Business Enterprise Liaison Officer include:

- Compilation and reporting of the statistical data required by USDOT



- Review of contracts and requisitions for Program compliance
- Coordination with DFW departments to set overall annual goals
- Ensure that notices and requests for bids/proposals are available to DBEs in a timely manner
- Identify contracts and solicitations and ensure DBE race and gender and race-neutral goals are included on contracts and compliance with the DBE contract goals
- Analyze DFW's goal attainment progress and identify ways to improve utilization
- Participate in prebid and pre proposal meetings
- Advise DFW's Chief Executive Officer and DFW's Board of Directors of DBE matters and achievements
- Monitor contractor compliance with good faith efforts
- Provide DBEs with information for obtaining bonding and insurance
- Plan and participate in DBE training seminars
- Ensure DBEs certification complies with USDOT criteria
- Outreach aggressively to DBEs and community organizations to advise them of contracting opportunities
- Maintain an updated DBE certification directory
- Coordinate interim and post-award compliance reviews

3. Disadvantaged Business Enterprise Certification

DFW accepts DBE certifications approved by the North Central Texas Regional Certification Agency, the US Small Business Administration's 8(a) certification, and the Texas Unified Certification Program.



4. Disadvantaged Business Enterprise Goals

To meet this objective as set forth in the regulations, 49 CFR Part 26, and Part 23, DFW adopted annual DBE aspirational goals. The fiscal year 2009 DBE aspirational goal is 33 percent. The industry specific goals are presented below:

- Construction 30 percent
- Professional Service 27 percent
- Procurement 25 percent
- Concessions varies by trade

IV. MINORITY AND WOMEN BUSINESS ENTERPRISE PROGRAM REVIEW

DFW's Business Diversity and Development Department is responsible for administering, monitoring, and enforcing Minority and Woman-owned Business Enterprise (M/WBE) policies, standards, and procedures.

1. Minority and Woman-owned Business Enterprise Policy

It is DFW's M/WBE Policy to support the growth and development of minority and woman-owned businesses to successfully compete for DFW prime contracting opportunities. DFW also encourages and fosters the growth and development of locally-owned minority and woman-owned businesses in the cities of Dallas and Fort Worth as well as surrounding communities.

2. Minority and Woman-owned Business Enterprise Certification

DFW accepts minority and woman-owned businesses that are certified as M/WBEs by DFW's Business Diversity and Development Department or any one of the certification agencies listed below:

- North Central Texas Regional Certification Agency
- DFW Minority Business Council
- US Small Business Administration's 8(a) certifications
- The approved entities of the Texas Unified Certification Program



- Woman’s Business Council-Southwest.

3. Minority and Woman-owned Business Enterprise Goals

DFW sets aspirational M/WBE goals based on its current Availability and Disparity Study.

V. RACE AND GENDER-CONSCIOUS REMEDIES

Mason Tillman recommends several race and gender-conscious remedies to address the statistically significant findings of underutilization for M/WBEs

A. Overall MBE Subcontracting Goals

Construction subcontracts had a statistically significant disparity for African American and Asian American business enterprises. Overall MBE Subcontracting goals should be set on prime contracts as a strategy to eliminate the documented disparity. The overall subcontracting goal should reflect the availability of the statistically significant underutilized group in the Availability and Disparity Study. Table 8.09 depicts the availability of statistically significant underutilized African American and Asian American subcontractors.

Table 8.09 Subcontractor Availability

Underutilized Groups	Construction Availability Percentage
African American Businesses	18.08%
Asian American Businesses	3.14%



B. Establish Weighted Construction Subcontracting Goals

Subcontracting goals should be set on DFW's non-federal contracts for the groups that had a statistically significant underutilization. The goals should be set for each specific construction contract based on the items of work and the groups current availability levels. DFW's Business Diversity and Development Department should review all DFW solicitations to determine the goals, if applicable.

The goals should be stipulated in each Request for Bids.

C. Set Overall Disadvantaged Business Enterprise Goals

DFW should set overall DBE goals based on the two-step process set forth in 49 CFR Part 26.45. The overall DBE goals should be narrowly tailored to the availability documented in the Availability and Disparity Study and adjusted in accordance with the Step 2 standards.

VI. RACE AND GENDER-NEUTRAL RECOMMENDATIONS

The race and gender-neutral recommendations contained in this section apply to all of DFW's prime contracts. Application of these recommendations could address barriers encountered by small businesses in doing business with DFW and in the market area in which it infuses contract dollars.

A. Pre-Award Recommendations

1. Expand Unbundling Policy

DFW routinely unbundles large contracts to provide additional opportunities for DBEs. Although DFW has implemented measures to unbundle its contracts to increase opportunities for M/W/DBEs to participate, a mere 19 contractors received 61 percent of the contracts awarded during the study period. The 19 vendors represented less than two percent of the 1,037 utilized vendors. The largest of the contracts these vendors received was \$50,045,763.

Therefore DFW should make a greater effort to unbundle its contracts to increase the number of businesses participating at both prime contract and subcontract levels. Smaller prime contracts would result in smaller first-tier subcontracts. DFW's Business Diversity



and Development Department should participate in the review of all large contracts to determine if they can be unbundled. The following criteria should be used in the evaluation:

- The size and complexity of the solicitation
- The number of locations in the project
- The sequencing and delivery of the work
- The similarity of the goods and services procured
- The availability of M/W/DBEs to perform parts of the solicitation

2. Expand the Mentor/Protégée Program

DFW's M/WBE Program has a Mentor/Protegee component which encourages the teaming of small contractors with large established contractors. The Program should also be incorporated into DFW's DBE Program to increase the participation of DBEs on its contracts. DFW could provide incentives to its prime contractors to furnish technical and business assistance to increase the capacity of small, disadvantaged, minority, and woman-owned businesses to build their capacity to perform as prime contractors.

3. Establish a Direct Purchase Program for Construction Contracts

This program would reduce the amount of a construction bid subject to a bond. For the purpose of bonding the cost of supplies would be subtracted from the bid, thereby reducing the amount of the contractor's bond that would be obligated for the job.

A direct purchase program can be beneficial to both DFW and the prime contractors, especially the minority and disadvantaged businesses. The surety bond premium would be reduced by the value of the material cost. In addition more competitive pricing should be available from the supplier because DFW would make the payment directly. Savings on the direct cost of supplies would be a benefit to DFW and to the contractor because the cash flow required to pay suppliers in advance of receiving reimbursement from DFW would be eliminated.

4. Post Plan Holder Lists

DFW should make available on its website the plan holders lists for each bid. Additionally, certified businesses offering the goods and services being could be targeted for each contract using e-mail distribution. E-mail and online posting reduce costs for DFW while increasing the potential bidder pool for both prime contracts and subcontracts.



5. Virtual Plan Room

DFW should consider purchasing software that would allow bidders to obtain digitized plans and specifications on DFW's website. Such software could reduce the need to designate a space for a plan room.

6. Form Partnerships with Lending Institutions

DFW should leverage existing relationships with financial institutions to assist small and disadvantaged businesses to secure competitive financing and start-up funding. Partnering with DFW to foster small business development can be beneficial in meeting the financial institution's Community Reinvestment Act obligations.

7. Remove Brand Name Requirements in Solicitations

DFW should refrain from specifying brand names in their solicitations in order to avoid restricting competition because the named brands may not be available to the M/W/DBE.

8. Owner Controlled Insurance Program

DFW should consider establishing an Owner Controlled Insurance Program (OCIP) to consolidate risk management costs and reduce the burden of the insurance premium for small business owners. Contractors working in DFW's Air Operations Area (AOA) are required to obtain an access permit to authorize their motor vehicles' entry in the AOA. A Certificate of Liability Insurance must include commercial general liability insurance, business automobile liability insurance, and excess / umbrella liability insurance each with a \$10,000,000 coverage limit. Under an OCIP or "wrap-up" program, DFW would provide for its projects, the insurance required to work on the AOA. The project insurance would be provided for both prime contractors and subcontractors.

Small businesses are at a competitive disadvantage because their insurance premiums are higher and typically the costs are spread over fewer contracts in contrast to the large contractor with more contracts against which the fees can be defrayed. Therefore, OCIP could assist in leveling the playing field by reducing insurance expenses for M/W/DBEs.

An OCIP could be established in cooperation with other local governmental agencies. The participating governmental agencies should realize a cost benefit from the reduction in the insurance premium which the contractors pass through in their bids and proposals

9. Revise Bonding Requirements

Bonding requirements can be a significant disincentive to bidders, and a barrier to M/W/DBEs bidders. Surety premiums are an indirect cost to DFW which the prime contractors and subcontractors pass through in their bids. Therefore, DFW should consider



implementing a Surety Assistance Program for small contracts. A Surety Assistance Program would attract more bidders and thereby increase competition and reduce costs. Any revisions to the bonding provisions must comply with statutory requirements.

The bonding levels on smaller contracts should be evaluated to ensure that the requirement is not disproportionate to the risk posed by the project. On small contracts the bonding requirements should be waived except where required by State law. The insurance requirements stipulated in the standard contract provisions should be reviewed to limit the coverage to reasonable risks.

10. Revise Expedited Payment Program

DFW has an expedited payment program to ensure timely payment of subcontractors invoices. This Program applies to multi-year contracts for construction and maintenance services valued at \$10,000,000 and above. Under the Program the prime contractor voluntarily pays its subcontractors within seven days of receiving the subcontractor's invoice and DFW pays the prime contractor interest on the advance payment as an incentive.

DFW should apply the Expedited Payment Program to all construction and maintenance contracts valued at \$1,000,000 and above. An expanded program would benefit subcontractors who work on smaller projects.

11. Publish Informal Contracts

Informal contracts should be posted on DFW's website and small businesses should be requested to express their interest in performing the small contracts. E-mail notices should also be distributed to certified businesses providing the goods or serviced required.

12. Conduct a M/W/DBE Outreach Campaign

There should be a comprehensive outreach campaign to promote the enhancements from the Availability and Disparity Study which are incorporated in the current M/W/DBE Programs. Table 8.10 below lists strategies and tactics that can be used to complement the broad based outreach program of the Business Diversity and Development Department.



Table 8.10 Outreach and Marketing Strategies

Strategy	Tactics
Design tagline produce banner display	<ul style="list-style-type: none"> • Develop tagline • Design banner with placement of existing logo and new tagline
Define design standards, layout, and appearance of solicitation documents for the organization	<ul style="list-style-type: none"> • Revise all solicitation materials to include the program logo and tagline in order to have a uniform appearance
Develop collateral print material for outreach campaign	<ul style="list-style-type: none"> • Produce brochure to reflect the project goals and objectives • Develop articles and media packets
Launch outreach campaign	<ul style="list-style-type: none"> • Distribute media packets and press releases • Place public service announcements • Pitch campaign to broadcast media
Host semi-annual contractors' open house and other networking events	<ul style="list-style-type: none"> • Plan and coordinate open house events • Send out invitations via mail, fax, and e-mail • Include procurement department in outreach events • Make informal contract opportunities available • Distribute contract forecasts and certification forms
Distribute forecasts to targeted businesses	<ul style="list-style-type: none"> • Advertise on billboards • Post forecast to website • Distribute through fax and e-mail • Advertise forecasts on billboards
Partner with agencies and organizations to disseminate program information	<ul style="list-style-type: none"> • Continue current agency partnerships • Develop local business and trade group partners
Conduct an annual program evaluation	<ul style="list-style-type: none"> • Establish measurable outcomes • Conduct surveys • Examine bidding history

13. Quantify Good Faith Effort Criteria

DFW has good faith effort requirements for both the M/WBE and DBE programs. DFW should consider establishing a rating system with specific standards to measure compliance with each of the eight factors. Specific points on a one hundred point scale would be assigned to each factor. Points for each measurable procedure should be assigned to



quantify the evaluation. The good faith effort reviews would adhere to the point system.

14. Pay Mobilization to Subcontractors

DFW provides mobilization payments to the prime contractor. Project start-up costs can also be significant for a subcontractor who often has limited access to credit, therefore they should also receive mobilization. Whenever a mobilization payment is made to a prime contractor, the subcontractor should be paid an amount equal to its participation percentage when directed to mobilize and prior to commencing work.

B. Post-Award Recommendations

1. Conduct Routine Post-Award Contract Compliance Monitoring

Routine and rigorous contract compliance monitoring should be conducted to track the participation of minority and woman-owned businesses listed in the bids, proposals, and statements of qualification. Monthly contract compliance monitoring will also ensure that the subcontractor participation listed in bids, proposals, and statements of qualification is achieved throughout the duration of a contract. Regular compliance monitoring would verify that the prime contractors are honoring their subcontracting commitments prior to and after the award of the contract. Consistent contract compliance monitoring would minimize the hardships experienced by small and disadvantaged businesses due to unauthorized substitutions and late payments.

The following contract compliance monitoring methods are recommended:

- Track and report subcontractor utilization in an electronic database
- Collect copies of the canceled checks written to subcontractors in order to verify payment information on a quarterly basis
- Impose penalties for failure to list or pay a subcontractor for work performed

2. Publish M/W/DBE Utilization Reports

Utilization reports that measure the effectiveness of the M/WBE and DBE programs should present payment and award data organized by industry, department, ethnicity, gender, and certification status. Change orders and substitutions should be identified in the reports and the changes in subcontractors or the subcontract amount should be tracked.

The utilization reports should be submitted to DFW's Board of Directors on a quarterly basis. The fourth quarter report should include an assessment of program activities and recommendations for improvement. Exemplary practices and achievements in each department should also be noted in the fourth quarter report. All utilization reports should



be posted on DFW's website and made available to businesses by e-mail.

3. Payment Verification Program

A web-based payment verification program should be instituted. All prime payments would be posted weekly to inform subcontractors when the prime contractor has received payment from DFW. The posting should be scheduled for the same day and time each weekday to simplify the time required for subcontractors to track their prime contractor's payment. Web postings should reduce the time DFW staff presently spends to address subcontractors' questions regarding their prime contractor's payment.

4. Provide Debriefing Sessions for Unsuccessful Bidders

Debriefing sessions for unsuccessful bidders should be held by the project managers. These sessions could provide vital information to assist businesses to prepare more competitive submittals.

VII. ADMINISTRATIVE RECOMMENDATIONS

A. Website Enhancements

DFW's website was evaluated with the goal of improving its functionality, informational value, and access for contractors interested in DFW contracting opportunities. DFW's procurement page includes a link to a stand-alone Supplier Registration application for anyone interested in doing business with DFW under the Oracle iSupplier Portal. The functionality of this application is controlled by Oracle Corporation, therefore it was not evaluated.

1. Improve Website Structure to Assist Users in Achieving Their Goals.

One consistent trait of internet users is their goal-oriented approach when visiting a web page. Instead of reading through carefully and sequentially, users quickly and superficially scan a page for items that seem related to their immediate task.

DFW has a "Business Opportunities" link high on the main page with a background color that is different from the rest of the menu bar, making its link readily visible.

However, the pages linked to the "Business Opportunities" page are text-heavy and do not provide an apparent "next step" for the user. The site could provide content in a format that immediately answers the user's question or directs the user to the answer. The pages linked to the "Business Opportunities" page are also a relatively small font, in a low-contrast medium gray color, which could be a readability issue. A larger font and a more concise



text that can be easily scanned would allow the user to find information quickly and therefore increase usability and utility.

2. Consider the Needs of Visitors with Disabilities

While the web is still a largely visual medium, it is nevertheless important to take into consideration users who cannot access it in the standard way. A website design must also consider its accessibility to those who depend on alternative technologies to interact with the Internet

Text that is concise and not too wordy would improve the visually impaired user's experience because they would not have to listen to unnecessary text to secure the needed information.

When DFW's website was tested using a basic web-based screen reader, it was easily accessed and interpreted by the reader. However, converting the text to a more concise and direct style could enhance that experience, making the DFW site even more user-friendly.





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