

City of Fort Worth, Texas Disparity Study 2020



CITY OF FORT WORTH DISPARITY STUDY

2020

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About the Study Team

CH Advisors Inc. ("Advisors"), formerly known as Colette Holt & Associates, is a national consulting firm specializing in issues related to Minority, Women, Disadvantaged and Small Business Enterprise programs, supplier diversity initiatives, and affirmative action issues. The firm has conducted court-approved disparity studies and designed court-approved programs for over 25 years, including for numerous Texas governments. Advisors also provides training, monitoring and investigative services across the country to agencies and businesses. Colette Holt, the founding principal of both Colette Holt & Associates and CH Advisors, Inc., is also a frequent expert witness, monitor and a media author and commentators. Advisors is led by Colette Holt, J.D., a nationally recognized attorney and expert. In addition to Ms. Holt, the firm consists of Steven C. Pitts, Ph. D., who serves as the team's economist and statistician; Ilene Grossman, B.S., Advisors Project Administrator; Glenn Sullivan, B.S., Advisors Director of Technology; Victoria Farrell, MBA, Advisors Assistant Principal Researcher; and Joanne Lubart, J.D., Special Counsel. Advisors is certified as a Disadvantaged Business Enterprise, Minority-Owned Business Enterprise and a Woman-Owned Business Enterprise by numerous agencies.

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

Acknowledgments

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Table of Contents

I. Executive Summary	1
A. Study Methodology and Data	1
B. Legal Standards	1
C. City of Fort Worth’s Business Diversity Enterprise Program	3
1. Experiences with the City’s BDE Program	6
D. Utilization, Availability and Disparity Analyses	7
E. Analysis of Economy-Wide Race and Gender Disparities in the City’s Market	14
F. Qualitative Evidence of Race and Gender Barriers in the City of Fort Worth’s Overall Market	15
G. Recommendations	16
1. Enhance Race- and Gender-Neutral Measures	17
2. Revise the Business Diversity Enterprise Program	18
II. Legal Standards for Contracting Affirmative Action Programs	23
A. Summary of Constitutional Equal Protection Standards	23
B. Elements of Strict Scrutiny	26
C. Establishing a “Strong Basis in Evidence” for the City of Fort Worth’s Minority- and Women-Owned Business Enterprise Program	30
1. Define the City of Fort Worth’s Market Areas	32
2. Examine Disparities between the City of Fort Worth’s Utilization of M/WBEs and M/WBE Availability	32
3. Analyze Economy-Wide Evidence of Race- and Gender-Based Disparities	37
4. Evaluate Anecdotal Evidence of Race- and Gender-Based Barriers	38
D. Narrowly Tailoring a Minority-Owned and Women-Owned Business Enterprise Procurement Program for the City of Fort Worth	39
1. Consider Race- and Gender-Neutral Remedies	40
2. Set Targeted M/WBE Goals	41
3. Ensure Flexibility of Goals and Requirements	42
4. Review Program Eligibility Over-Inclusiveness and Under-Inclusiveness	43
5. Evaluate the Burden on Third Parties	44
6. Examine the Duration and Review of the Program	45
III. City of Fort Worth’s Business Diversity Enterprise Program	47
A. City of Fort Worth’s Business Diversity Enterprise Program Provisions	47
1. Administration of the City of Fort Worth’s Business Diversity Enterprise Programs	48

- 2. Certification and Program Eligibility Requirements for Business Diversity Enterprise Programs . . . 48
- 3. Business Diversity Enterprise Goal Setting and Program Elements 49
- 4. Capacity Building, Outreach Activities and Training 52
- 5. Post Award Procedures and Contract Monitoring. 54
- B. Experiences with the City of Fort Worth’s Business Diversity Enterprise Program 55
 - 1. Outreach to M/WBEs and small firms 55
 - 2. Pre-award contract specifications, requirements and processes 56
 - 3. Obtaining work through the program 57
 - 4. Payment 58
 - 5. Small business assistance initiatives. 59
 - 6. Meeting M/WBE contract goals 60
- C. Conclusion. 63

IV. Utilization, Availability and Disparity Analyses for the City of Fort Worth . . 65

- A. Contract Data Overview. 65
- B. The Product and Geographic Markets for the City of Fort Worth’s Contracts 66
 - 1. The Unconstrained Product Market for the City’s Contracts 66
 - 2. The City of Fort Worth’s Geographic Market. 67
 - 3. The Utilization of M/WBEs on the City of Fort Worth’s Contracts. 68
 - 4. The Availability of M/WBEs in the City of Fort Worth’s Constrained Product Market. 83

V. Analysis of Economy-Wide Disparities in the City of Fort Worth’s Markets 99

- A. Introduction 99
- B. Disparate Treatment in the Marketplace: Evidence from the Census Bureau’s 2014 - 2018 American Community Survey 102
 - 1. All Industries Combined in the Dallas Fort Worth Metropolitan Area. 104
 - 2. The Construction Industry in the Dallas Fort Worth Metropolitan Area. 107
 - 3. The Construction-Related Services Industry in the Dallas Fort Worth Metropolitan Area 109
 - 4. The Goods Industry in Dallas Fort Worth Metropolitan Area. 111
 - 5. The Services Industry in Dallas Fort Worth Metropolitan Area 113
 - 6. The Information Technology Industry in the Dallas Fort Worth Metropolitan Area 115
- C. Disparate Treatment in the Marketplace: Evidence from the Census Bureau’s 2012 Survey of Business Owners. 117
 - 1. All Industries 119
 - 2. Construction 123
 - 3. Construction-Related Services. 124
 - 4. Goods. 125
 - 5. Services 126
- D. Evidence of Disparities in Access to Business Capital 126
- E. Evidence of Disparities in Access to Human Capital 129

VI. Qualitative Evidence of Race and Gender Barriers in the City of Fort Worth’s Market 131

 A. Business Owner Interviews 132

 B. Conclusion 138

VII. Recommendations for the City of Fort Worth’s Business Diversity Program 139

 A. Enhance Race- and Gender-Neutral Measures 140

 1. Implement Additional Features of the City’s Electronic Contracting Data Collection and Monitoring System 140

 2. Increase Outreach to M/WBEs and Small Firms 140

 3. Increase Contract “Unbundling” 141

 4. Review Requirements 141

 5. Provide Training to City Staff 141

 B. Revise the Business Diversity Enterprise Program 142

 1. Use the Study to Set the M/WBE Annual Goal 143

 2. Use the Study to Set Narrowly Tailored Contract Specific Goals 143

 3. Count Certified Prime Vendors’ Performance Towards Meeting Contract Goals 145

 4. Review Program Policies, Procedures and Forms 146

 5. Implement the Mentor-Protégé Program 146

 C. Conduct Regular BDE Program Reviews 148

 D. Develop Performance Measures for Program Success 148

Appendix A: Further Explanation of the Multiple Regression Analysis 151

Appendix B: Further Explanation of the Probit Regression Analysis 153

Appendix C: Significance Levels 155

Appendix D: Additional Data from the Utilization Analyses for City of Fort Worth 157

List of Tables

- Table 1-1: Industry Percentage Distribution of Contracts by Dollars 8
All Contracts
- Table 1-2: Distribution of Contracts in the City’s Product Market 9
- Table 1-3: Distribution of Contract Dollars by Race and Gender. 10
(share of total dollars)
- Table 1-4: Aggregated Weighted Availability for the City’s Contracts 14
- Table 1-5: Disparity Ratios by Demographic Group 14
- Table 4-1: Industry Percentage Distribution of Contracts by Dollars 66
All Contracts
- Table 4-2: Distribution of Contracts in the City of Fort Worth’s Geographical Market. 68
- Table 4-3: NAICS Code Distribution of Contract Dollars. 69
- Table 4-4: Distribution of Contract Dollars by Race and Gender. 74
(total dollars)
- Table 4-5: Distribution of Contract Dollars by Race and Gender. 79
(share of total dollars)
- Table 4-6: Unweighted Availability for the City of Fort Worth’s Contracts 85
- Table 4-7: Share of the City Spending on the City of Fort Worth’s Contracts 89
by NAICS Code
- Table 4-8: Aggregated Weighted Availability for the City of Fort Worth’s Contracts 94
- Table 4-9: Disparity Ratios by Demographic Group 94
- Table 4-10: Hispanic Versus Non-M/WBE Outcomes in NAICS Code 541330 95
(Engineering Services)
- Table 4-11: Asian Versus Non-M/WBE Outcomes in NAICS Code 237310. 96
(Highway, Street, and Bridge Construction)
- Table 4-12: White Women Versus Non-M/WBE Outcomes in NAICS Code 541330. 97
(Engineering Services)
- Table 5-1: Business Formation Rates 105
All Industries, 2014 - 2018
- Table 5-2: Business Formation Probabilities Relative to White Males 106
All Industries, 2014 - 2018
- Table 5-3: Wage Differentials for Selected Groups Relative to White Men. 106
All Industries, 2014 - 2018
- Table 5-4: Business Earnings Differentials for Selected Groups Relative to White Men. 107
All Industries
- Table 5-5: Business Formation Rates 107
Construction, 2014 - 2018
- Table 5-6: Business Formation Probability Differentials for Selected Groups 108
Relative to White Men, Construction, 2014 - 2018
- Table 5-7: Wage Differentials for Selected Groups Relative to White Men. 108
Construction, 2014 - 2018

Table 5-8: Business Earnings Differentials for Selected Groups Relative to White Men.	109
Construction, 2014 - 2018	
Table 5-9: Business Formation Rates	109
Construction-Related Services, 2014 - 2018	
Table 5-10: Business Formation Probability Differentials for Selected Groups	110
Relative to White Men, Construction-Related Services, 2014 - 2018	
Table 5-11: Wage Differentials for Selected Groups Relative to White Men.	110
Construction-Related Services, 2014 - 2018	
Table 5-12: Business Earnings Differentials for Selected Groups Relative to White Men.	110
Construction-related Services, 2014 - 2018	
Table 5-13: Business Formation Rates	111
Goods, 2014 - 2018	
Table 5-14: Business Formation Probabilities Relative to White Males	112
Goods, 2014 - 2018	
Table 5-15: Wage Differentials for Selected Groups Relative to White Men.	112
Goods, 2014 - 2018	
Table 5-16: Business Earnings Differentials for Selected Groups Relative to White Men.	113
Goods, 2014 - 2018	
Table 5-17: Business Formation Rates	113
Services, 2014 - 2018	
Table 5-18: Business Formation Probability Differentials for Selected Groups	114
Relative to White Men, Services, 2014 - 2018	
Table 5-19: Wage Differentials for Selected Groups Relative to White Men.	114
Services, 2014 - 2018	
Table 5-20: Business Earnings Differentials for Selected Groups Relative to White Men.	115
Services, 2014 - 2018	
Table 5-21: Business Formation Rates	115
Information Technology, 2014 - 2018	
Table 5-22: Business Formation Probability Differentials for Selected Groups	116
Relative to White Men, Information Technology, 2014 - 2018	
Table 5-23: Wage Differentials for Selected Groups Relative to White Men.	116
Information Technology, 2014 - 2018	
Table 5-24: Business Earnings Differentials for Selected Groups Relative to White Men.	117
Information Technology, 2014 - 2018	
Table 5-25: 2-Digit NAICS Code Definition of Sector	119
Table 5-26: Percentage Demographic Distribution of Sales and Payroll Data	120
All Industries, 2012	
Table 5-27: Demographic Distribution of Sales and Payroll Data – Aggregated Groups.	122
All Industries, 2012	
Table 5-28: Disparity Ratios of Firm Utilization Measures	123
All Industries, 2012	
Table 5-29: Disparity Ratios – Aggregated Groups	123
Construction, 2012	
Table 5-30: Disparity Ratios – Aggregated Groups	124
Professional, Scientific, and Technical Services, 2012	

Table 5-31: Disparity Ratios – Aggregated Groups 125
Goods, 2012

Table 5-32: Disparity Ratios – Aggregated Groups 126
Services, 2012

Table D-1: Industry Percentage Distribution of Contracts by Dollars Paid 157
All Contracts

Table D-2: Industry Percentage Distribution of Contracts by Dollars Paid 163
Prime Contracts

Table D-3: Industry Percentage Distribution of Contracts by Dollars Paid 164
Subcontracts

I. EXECUTIVE SUMMARY

A. Study Methodology and Data

Colette Holt & Associates (CHA) was retained by the City of Fort Worth (“the City”) to perform a study regarding its Business Diversity Enterprise (“BDE”) program for Minority- and Women-Owned Business Enterprises (“M/WBEs”). The methodology for this study embodies the constitutional principles of *City of Richmond v. Croson*, Fifth Circuit Court of Appeals case law and best practices for designing race- and gender-conscious and small business contracting programs. The CHA approach has been specifically upheld by the federal courts. It is also the approach developed by Ms. Holt for the National Academy of Sciences that is now the recommended standard for designing legally defensible disparity studies.

We determined the City’s utilization of M/WBEs during fiscal years 2013 through 2018; the availability of these firms as a percentage of all firms in the City’s geographic and industry market areas; and any disparities between the City’s utilization of M/WBEs and M/WBE availability. We further analyzed disparities in the wider Dallas-Fort Worth Metroplex economy, where affirmative action is rarely practiced, to evaluate whether barriers continue to impede opportunities for minorities and women when remedial intervention is not imposed. We further gathered anecdotal and qualitative data about the experiences of minority- and women-owned firms in obtaining City contracts and the associated contracts and concession opportunities. We evaluated the City’s programs for conformance with constitutional standards, national best practices, and the M/WBE program regulations.

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

B. Legal Standards

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

The government must establish its “compelling interest” in remediating race discrimination by current “strong evidence” of the persistence of discrimination. Such evidence may consist of the entity’s “passive participation” in a system of racial exclusion. Any remedies adopted must be “narrowly tailored” to that dis-

crimination; the program must be directed at the types and depth of discrimination identified.¹

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

1. Statistical evidence of the underutilization of minority- or women-owned firms by the agency and/or throughout the agency's geographic and industry market area compared to their availability in the market area. These are disparity indices, comparable to the type of "disparate impact" analysis used in employment discrimination cases.
2. Anecdotal evidence of race- or gender-based barriers to the full and fair participation of minority and women firms in the market area or in seeking contracts with the agency, comparable to the "disparate treatment" analysis used in employment discrimination cases. Anecdotal data can consist of interviews, surveys, public hearings, academic literature, judicial decisions, legislative reports, and other information.

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

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

The case law on the Disadvantaged Business Enterprise ("DBE") program for U.S. Department of Transportation-assisted contracts should guide the City's. Whether the program is called an M/WBE program or a DBE program or any other moniker, the strict scrutiny test applies. 49 C.F.R. Part 26 has been upheld by every court, and local programs for M/WBEs will be judged against this legal framework. We note that programs for veterans, persons with disabilities, preferences based on geographic location or truly race- and gender-neutral small business efforts are not subject to strict scrutiny and no evidence comparable to the type of proof required in a disparity study is needed to enact such initiatives.

It is well established that disparities between an agency's utilization of M/WBEs and their availability in the relevant marketplace provide a sufficient basis for the consideration of race- or gender-conscious remedies. Proof of the disparate impacts of economic factors on M/WBEs and the disparate treatment of such

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

firms by actors critical to their success will meet strict scrutiny. Discrimination must be shown using statistics and economic models to examine the effects of systems or markets on different groups, as well as by evidence of personal experiences with discriminatory conduct, policies or systems. Specific evidence of discrimination or its absence may be direct or circumstantial and should include economic factors and opportunities in the private sector affecting the success of M/WBEs.

C. City of Fort Worth’s Business Diversity Enterprise Program

The City of Fort Worth’s Business Diversity Enterprise (BDE) Ordinance governs access to contracting and subcontracting opportunities on the City’s locally funded contracts. The BDE Ordinance was adopted in 2011 to remedy the effects of past underutilization of minority and women business enterprises in the Fort Worth marketplace. A 2009 Availability and Disparity Study and previous similar studies found disparities in the City’s utilization of M/WBEs on contracts in the construction, goods and services and professional services industries.

The BDE Ordinance outlines, in detail, the required business diversity initiatives for locally funded contracts for construction, professional services, purchase agreements and any other contracts that the City Council or City Manager determine to be appropriate. The BDE Ordinance includes provisions for the following: certification requirements; program goal setting process (purchases over \$50,000); program criteria for joint ventures; M/WBE Prime Contracts; Small Business Enterprise (SBE) subcontracting; procurements less than \$50,000; applicable contracts; post award compliance; contract monitoring and reporting; exceptions and waivers; program administration; sanctions and severability. The Ordinance does not set an expiration date for the program but does require a review by the City Council every five years to determine whether it remains necessary.

Fort Worth’s M/WBE initiatives are administered by the Office of Business Diversity, which reports to the newly formed Diversity and Inclusion Department under the City Manager, Deputy City Manager and Assistant City Managers. It is the responsibility of the City Manager to establish, implement and administer the regulations directed by the BDE Ordinance. The Business Development Manager (or designee) administers the overall and day-to-day implementation of the City’s program. A Minority and Women Business Enterprise Advisory Committee (the “M/WBE-AC”), which is appointed by the City Council, serves in an advisory role to review Availability and Disparity Study findings, help the City Manager in implementing the program and to inform and make recommendations to the City Manager and Council about program initiatives. The Minority and Women Business Enterprise Advisory Committee is comprised of 18 members: one representative

from each of the four Chambers of Commerce; six partner organizations that promote the utilization and growth of M/WBEs; one regional certification agency; two community groups; and five internal City of Fort Worth Departments to serve the City in an advisory capacity.

The City accepts certifications from the Dallas/Fort Worth Minority Development Council, North Central Texas Regional Certification Agency, Texas Department of Transportation and the Women's Business Council - Southwest. To qualify, a firm must be located within the six-county marketplace, i.e., Tarrant, Dallas, Denton, Johnson, Parker and Wise counties. A business may also qualify if it has a Significant Business Presence within the marketplace, defined as a business whose Principal Place of Business is outside the marketplace and whose location within the marketplace has been verified to be in existence for a minimum of 24 months and where at least 20% of the business' full-time and part-time employees are based.

The following contracting and subcontracting goals for M/WBEs are set by industry category for projects with values greater than \$50,000, based on the 2009 study:

- A 25 percent goal for MBE participation for construction contracts
- A 15 percent goal for African-American participation for professional contracts
- A 25 percent goal for M/WBE participation for goods and non-professional services
- A 15 percent SBE participation for architectural and engineering services

Individual subcontracting goals are set by the Office of Business Diversity.

In addition to the standard subcontracting options, projects designated as "Joint Venture Preferred" receive an additional 20 points for bids that include at least one M/WBE joint venture partner. To encourage M/WBEs to take on prime contracting work, M/WBE proposers, for construction contracts valued up to \$100,000 and professional services and architectural and engineering contracts up to \$150,000, will receive additional evaluation points and may not subcontract more than 49 percent to non-M/WBEs. The Small Business Enterprise Subcontracting Program is race and gender neutral and allows the City to establish goals on a contract-by-contract basis.

M/WBE and SBE utilization plans specifying how all elements of the work will be performed and the goals will be met are required for all solicitation types, although the timing of their submission varies based on the method of solicitation. For all proposal types, if M/WBE or SBE participation information is not submitted or a Good Faith Efforts ("GFE") explanation is not provided, the proposer will be deemed to be non-responsive. All businesses must be certified either at the time of bid or prior to recommendation of award to be counted towards the goal.

With the exception of some joint venture and Design Build contracts, the BDE Ordinance does not allow certified Prime firms to count their self-performance towards subcontracting goals.

A waiver may be requested by the contracting department through the Office of Business Diversity prior to the solicitation.

While there are no goal requirements for contracts valued at \$50,000 or less, each department with purchasing authority is encouraged to solicit three bids of which two must be with M/WBEs for solicitations between \$3,000 and \$50,000 to comply with the BDE Ordinance.

To assist in increasing participation of MBEs, the City plans to roll out a Mentor Protégé Program for certified MBEs in construction or construction-related services.

The City participates in a number of outreach events that include networking sessions, luncheons, informational meetings, The Office of Business Diversity hosts bi-monthly Vendor Informational Forums, quarterly certification workshops and Requests for Proposals (“RFP”), Requests for Qualifications (“RFQ”), Invitations to Bid (“ITB”), and Best Value Solicitation workshops. The City has a three-year partnership agreement with the Beck Group to host the Beck School of Construction in Fort Worth, TX. Additionally, the City has advocacy partners that host events that support business and economic development, of M/WBEs, such as the Dallas/Fort Worth Minority Business Development Council, US Pan Asian American Chamber of Commerce, Fort Worth Hispanic Chamber of Commerce, Fort Worth Metropolitan Black Chamber of Commerce, Regional Black Contractors Association, and Regional Hispanic Contractors Association.

There are several opportunities for staff training throughout the year. Staff training includes attendance at the American Contract Compliance Association’s annual National Training Institute² and Airport Minority Advisory Council conference. Special training is available from the Texas Unified Certification Program for the U.S. Department of Transportation’s Disadvantaged Business Enterprise program, as well as by the City’s vendor of its electronic data collection and monitoring system, B2Gnow, Inc. Staff can also attend the Beck and Turner Schools of Construction and training offered by other vendor groups.

To assist potential proposers and bidders, upcoming bids and requests can be accessed through the Purchasing website, Star Telegram newspaper, City News releases and email if the vendor is registered in the City’s vendor database, as well as through professional business and trade associations and campaigns. The

2. The Senior Contract Compliance Specialists (“CCSs”) have obtained their Executive Certified Master Compliance Administrator (ECMCA) Certification from Morgan State University through ACCA. This certification is the highest and most recognized certification in the country and symbolizes that one is an expert in the field.

B2Gnow system also sends advertisements and notifications to M/WBEs and SBEs of prospective contracting opportunities.

The BDE Ordinance sets forth a detailed process for monitoring, resolving and escalating contract non-compliance during the term of the contract, as well any requested changes in M/WBE or SBE participation. Any unjustified modification or deletion of participation by an M/SBE shall be deemed as a material breach of contract and may result in sanctions up to and including debarment. The City recently installed the B2Gnow electronic data collection and monitoring system to track payments.

If the Office of Business Diversity determines that a contractor is out of compliance with MWBE or SBE contract utilization, the Office will notify the contracting department and the contractor and attempt to resolve non-compliance through reconciliation. If the non-compliance cannot be resolved at this step, then the Business Development Manager, along with the contracting department, will submit written recommendations to the Legal Department. A finding of non-compliance by the Legal Department will result in the imposition of sanctions.

1. Experiences with the City's BDE Program

To explore the impacts of race- and gender-neutral contracting policies and procedures and the implementation of the City's BDBE program, we interviewed 80 individuals about their experiences and solicited their suggestions for changes.

Outreach to M/WBEs and Small Firms: Many participants thought the City could do more in addition to their current outreach efforts. This included outreach to specific industries such as engineering and construction, hosting more events and having City staff with decision-making authority participate in the outreach activities.

Pre-award Contract Specifications, Requirements and Processes: Insurance requirements, large contract sizes and the long wait times between notice of award and the notice to proceed were impediments to M/WBEs.

Obtaining Work Through the Program: M/WBEs reported that the program was vital to obtaining work on contracts for which they can be counted towards goals. However, the City's policy that the program only applies to sub-contracting work hurts their ability to become prime contractors and grow their firms. Many thought the City's adherence to the program and compliance with all requirements was helpful in getting work with the City.

Payment: The City and prime vendors received high marks for timely payments. However, change orders are an issue because they lead to long delays in payments. This is a problem particularly for small firms because they lack

working capital to finance delays. It also places a burden on general contractors.

Small Business Assistance Initiatives: Some M/WBEs thought the City could do more in making additional assistance available to help them with their businesses, such as how to estimate jobs, comply with City paperwork and effective marketing, etc. Another initiative receiving support was the Mentor-Protégé program.

Meeting M/WBE Contract Goals: While not always easy, most prime firms were able to meet M/WBE contract goals on City projects. However, smaller majority contractors found compliance with the program requirements to be burdensome and often challenging. Some raised questions about how the City sets contract goals and whether the goals are reasonable and achievable.

Program Eligibility and the City's List of Certified Firms: Another issue that was raised was the exclusion of White women from the program which was recommended by the City's prior disparity study. In addition, several prime contractors reported that the City's list of certified firms that can be used to meet the goal contains many firms that either do not do the type of work listed in the directory or have even gone out of business.

Prequalification Requirements and Compliance Documentation: Another barrier is the City's requirement that some sub trade firms must be prequalified to work as subcontractors on City jobs. Some contractors also thought the quick turnaround time for program compliance documentation was unreasonable.

D. Utilization, Availability and Disparity Analyses

CHA analyzed contract data for the years fiscal 2013 through 2018 for the City's contracts. To conduct this analysis, we constructed all the fields necessary for our analysis where they were missing in the City's contract records (*e.g.*, industry type; zip codes; NAICS codes of prime contractors and subcontractors; non-certified subcontractor information, including payments, race, gender; etc.). The resulting Final Contract Data File ("FCDF") for analysis contained 315 prime contracts, with a total net paid amount of \$658,947,162. Subcontractors received 1,841 contracts. Prime contractors received \$440,065,101 of the net paid amount; subcontractors received \$218,882,055 of the net paid amount.

The FCDF was used to determine the geographic and product markets for the analyses, to estimate the utilization of M/WBEs. The FCDF was also used to calculate M/WBE availability in the City's marketplace.

The following Table presents the 15 NAICS codes that represented 90 percent of the value of the FCDF used to define the unconstrained product market for the City’s contracts. Table D-1 in Appendix D lists all 132 NAICS codes.

Table 1-1: Industry Percentage Distribution of Contracts by Dollars
All Contracts

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
237310	Highway, Street, and Bridge Construction	31.3%	31.3%
237110	Water and Sewer Line and Related Structures Construction	28.2%	59.5%
236220	Commercial and Institutional Building Construction	7.7%	67.3%
541330	Engineering Services	5.1%	72.4%
484220	Specialized Freight (except Used Goods) Trucking, Local	2.8%	75.2%
238210	Electrical Contractors and Other Wiring Installation Contractors	2.8%	78.0%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	1.9%	79.9%
237990	Other Heavy and Civil Engineering Construction	1.8%	81.7%
238910	Site Preparation Contractors	1.4%	83.2%
238220	Plumbing, Heating, and Air-Conditioning Contractors	1.4%	84.6%
423840	Industrial Supplies Merchant Wholesalers	1.3%	85.9%
324121	Asphalt Paving Mixture and Block Manufacturing	1.3%	87.1%
561730	Landscaping Services	1.2%	88.3%
327320	Ready-Mix Concrete Manufacturing	1.1%	89.4%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	1.1%	90.4%
TOTAL			100.0%

Source: CHA analysis of the City data.

To determine the relevant geographic market area, we applied the well accepted standard of identifying the firm locations that account for at least 75 percent of

contract and subcontract dollar payments in the contract data file. Location was determined by ZIP code and aggregated into counties as the geographic unit.

The State of Texas contained 97.3 percent of the contract dollars in this market. Three counties – Tarrant, Dallas, and Johnson - capture 92.6 percent of the Texas dollars (and 90.1 percent of the FCDF). Table 1-2 lists how these dollars were distributed across these three counties in Texas. Dallas, Tarrant, Dallas, and Johnson Counties comprise the geographic market.

Table 1-2: Distribution of Contracts in the City’s Product Market

State/County	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
Tarrant	68.9%	68.9%
Dallas	20.0%	89.0%
Johnson	3.6%	92.6%
TOTAL		100.0%^a

a. The rest of the counties in Texas captured 7.4 percent of the City’s spending in the state.

Source: CHA analysis of the City data.

Having determined the City’s product and geographic market area (and, therefore, the agency’s *constrained* product market), the next step was to determine the dollar value of the City’s utilization of M/WBEs³ as measured by payments to prime firms and subcontractors and disaggregated by race and gender. The City had not collected data for all non-M/WBE subcontractors, as well as other records critical for the study. City staff worked hard to clean up the data and fill in missing information. However, we still had to obtain missing data from prime vendors, a lengthy process, as well as reconstruct other contract records, including researching the race and gender ownership of subcontractors and assigning NAICS codes to those firms.

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

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

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

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
212312	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
212321	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
213112	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
221320	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
221330	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
236210	0.0%	14.4%	85.6%	0.0%	0.0%	100.0%	0.0%	100.0%
236220	0.7%	2.0%	0.0%	0.0%	14.1%	16.7%	83.3%	100.0%
237110	0.0%	3.6%	0.7%	0.0%	1.9%	6.3%	93.7%	100.0%
237120	0.0%	74.8%	0.0%	0.0%	0.2%	75.0%	25.0%	100.0%
237310	2.2%	4.2%	5.1%	0.0%	0.9%	12.4%	87.6%	100.0%
237990	0.8%	0.5%	5.1%	0.0%	0.0%	6.5%	93.5%	100.0%
238110	27.7%	47.6%	10.4%	0.0%	6.6%	92.3%	7.7%	100.0%
238120	1.0%	9.9%	0.0%	5.9%	9.6%	26.4%	73.6%	100.0%
238140	55.9%	10.7%	0.0%	0.0%	0.0%	66.6%	33.4%	100.0%
238150	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
238160	0.0%	56.9%	0.0%	0.0%	0.0%	56.9%	43.1%	100.0%
238190	0.0%	97.9%	0.0%	0.0%	0.3%	98.3%	1.7%	100.0%
238210	0.0%	9.2%	0.0%	0.0%	8.2%	17.3%	82.7%	100.0%
238220	8.5%	19.4%	0.0%	0.0%	3.5%	31.4%	68.6%	100.0%
238290	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
238310	0.0%	0.3%	0.0%	0.0%	9.9%	10.2%	89.8%	100.0%
238320	3.9%	32.0%	0.0%	0.0%	23.2%	59.1%	40.9%	100.0%
238330	0.0%	7.6%	0.0%	0.0%	14.4%	22.0%	78.0%	100.0%
238340	0.0%	0.5%	0.0%	0.0%	0.0%	0.5%	99.5%	100.0%
238350	5.7%	38.8%	0.0%	0.0%	7.1%	51.6%	48.4%	100.0%
238390	0.0%	0.0%	0.0%	0.0%	97.5%	97.5%	2.5%	100.0%
238910	5.2%	2.1%	0.6%	0.0%	55.5%	63.4%	36.6%	100.0%
238990	0.6%	31.6%	0.5%	0.0%	3.1%	35.8%	64.2%	100.0%

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
314999	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
316998	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
321114	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
323111	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
324110	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
324121	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
326122	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
327110	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
327320	0.0%	0.0%	0.0%	0.0%	80.7%	80.7%	19.3%	100.0%
327332	0.0%	31.4%	0.0%	0.0%	0.0%	31.4%	68.6%	100.0%
327410	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
331110	0.0%	0.0%	0.0%	0.0%	35.6%	35.6%	64.4%	100.0%
331210	0.0%	97.6%	0.0%	0.0%	0.0%	97.6%	2.4%	100.0%
331221	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
331511	0.0%	0.0%	0.0%	0.0%	0.6%	0.6%	99.4%	100.0%
332312	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
332618	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
332996	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
332999	0.0%	0.1%	0.0%	0.0%	46.1%	46.2%	53.8%	100.0%
333120	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
337215	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
339950	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423320	0.0%	0.0%	0.1%	0.0%	70.0%	70.1%	29.9%	100.0%
423390	0.0%	2.8%	0.0%	0.0%	0.0%	2.8%	97.2%	100.0%
423440	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
423510	0.0%	3.9%	0.0%	0.0%	0.3%	4.2%	95.8%	100.0%
423610	0.0%	31.6%	0.0%	0.0%	40.3%	71.9%	28.1%	100.0%
423710	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423720	0.0%	34.8%	0.0%	0.0%	0.0%	34.8%	65.2%	100.0%
423740	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%

City of Fort Worth Disparity Study 2020

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
423820	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423840	3.9%	57.9%	0.0%	0.0%	6.8%	68.6%	31.4%	100.0%
424120	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
424590	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
424690	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
424710	0.0%	0.0%	0.0%	0.0%	67.0%	67.0%	33.1%	100.0%
424720	0.0%	0.0%	0.0%	0.0%	82.9%	82.9%	17.1%	100.0%
424950	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
444120	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
444190	0.0%	53.9%	0.0%	0.0%	0.0%	53.9%	46.2%	100.0%
453998	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	0.0%	100.0%
454310	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
484110	14.7%	84.4%	0.0%	0.0%	0.0%	99.1%	0.9%	100.0%
484121	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
484220	27.8%	65.6%	0.0%	0.0%	3.4%	96.8%	3.2%	100.0%
484230	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
488410	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
488999	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
517311	0.0%	5.0%	0.0%	0.0%	95.1%	100.0%	0.0%	100.0%
519110	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
524126	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
531320	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
531390	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
532412	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
532490	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541191	0.0%	35.1%	0.0%	0.0%	65.0%	100.0%	0.0%	100.0%
541211	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541310	0.0%	0.0%	0.0%	0.0%	54.0%	54.0%	46.0%	100.0%
541320	18.3%	0.0%	0.0%	0.0%	0.0%	18.3%	81.7%	100.0%
541330	0.6%	28.0%	5.3%	4.8%	8.0%	46.7%	53.3%	100.0%

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
541340	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541350	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541370	0.0%	45.0%	0.0%	19.0%	28.1%	92.1%	7.9%	100.0%
541380	34.2%	7.7%	0.0%	0.0%	32.5%	74.4%	25.6%	100.0%
541420	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541611	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541613	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
541620	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
541715	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541720	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541820	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
541990	8.0%	28.2%	0.0%	0.0%	63.8%	100.0%	0.0%	100.0%
561311	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
561320	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
561440	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
561499	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
561621	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
561720	54.9%	0.0%	35.8%	0.0%	9.4%	100.0%	0.0%	100.0%
561730	0.0%	88.7%	0.0%	0.0%	1.9%	90.6%	9.4%	100.0%
561790	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
561910	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
561990	0.5%	34.0%	0.0%	0.0%	45.5%	79.9%	20.1%	100.0%
562111	96.8%	0.0%	0.0%	0.0%	3.2%	100.0%	0.0%	100.0%
562910	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
562991	0.0%	44.0%	0.0%	0.0%	13.6%	57.6%	42.4%	100.0%
811310	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Total	2.4%	10.0%	2.5%	0.4%	6.9%	22.1%	77.9%	100.0%

Source: CHA analysis of the City data.

Using the “custom census” approach to estimating availability and the further assignment of race and gender using the FCDF, the Master M/WBE Directory and

other sources, we determined the aggregated availability of M/WBEs, weighted by the City’s spending in its geographic and industry markets, to be 25.4 percent for City contracts. Table 1-4 presents the weighted availability data for all product sectors combined for the racial and gender categories.

Table 1-4: Aggregated Weighted Availability for the City’s Contracts

Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
6.6%	9.2%	1.7%	0.7%	6.9%	25.4%	74.6%	100.0%

Source: CHA analysis of the City data; Hoovers; CHA Master Directory.

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

Table 1-5: Disparity Ratios by Demographic Group

	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE
Disparity Ratio	36.2%‡	108.0%	144.1%	53.8%‡	101.0%	86.9%*	104.5%*

Source: CHA analysis of the City data; Hoovers; CHA Master Directory.

‡ Indicates substantive significance.

*Indicates statistical significance at the 0.05 level.

Because of the relatively high utilization of Hispanic, Asian and White women-owned firms, we conducted further analysis of the utilization of these groups and found that dollars were concentrated in a few NAICS codes that were a relatively large portion of the City’s spend during the study period. We therefore do not conclude that Hispanic, Asian and White women firms do not continue to need the remedial intervention of contract goals.

E. Analysis of Economy-Wide Race and Gender Disparities in the City’s Market

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

We analyzed the following data and literature:

- Data from the Census Bureau’s *Survey of Business Owners*. This set indicates very large disparities between M/WBE firms and non-M/WBE firms when examining the sales of all firms, the sales of employer firms (firms that employ at least one worker), or the payroll of employer firms.
- Data from the Census Bureau’s *American Community Survey* (“ACS”). This set indicates that Blacks, Hispanics and White women were underutilized relative to White men. Controlling for other factors relevant to business outcomes, wages and business earnings were lower for these groups compared to White men. Data from the ACS further indicate that non-Whites and White women are less likely to form businesses compared to similarly situated White men.
- The literature on barriers to access to commercial credit and the development of human capital. This research reports that minorities continue to face constraints on their entrepreneurial success based on race. These constraints negatively impact the ability of firms to form, to grow, and to succeed.

All three types of evidence have been found by the courts to be relevant and probative of whether a government will be a passive participant in overall marketplace discrimination without some type of affirmative intervention. Taken together with anecdotal data, this is the type of proof that addresses whether, in the absence of M/WBE contract goals, the City will be a passive participant in the discriminatory systems found throughout its industry market.

F. Qualitative Evidence of Race and Gender Barriers in the City of Fort Worth’s Overall Market

In addition to quantitative data, the courts look to anecdotal evidence of firms’ marketplace experiences to evaluate whether the effects of current or past discrimination continue to impede opportunities for M/WBEs, such that race-conscious measures are necessary to ensure a level playing field for all firms. To explore this type of anecdotal evidence, we conducted two public informational sessions, and small group business owner and stakeholder interviews in person and by telephone. Eighty individuals participated in the small group interviews. The following are brief summaries of the views expressed over the many sessions by numerous participants.

- Many minority and female owners reported that they still suffer from biased perceptions and stereotypes about their competency and professionalism. While sometimes subtle, these biases color all aspects of their attempts to obtain contracts and to be treated equally in performing contract work

- Critical business and professional networks remain closed to many minority and women entrepreneurs.
- Breaking into the network of Fort Worth vendors was especially difficult.
- Many women business owners experienced sexism and gender bias in the business world that impedes their ability to flourish. Some women reported that once they had proven themselves, sexist biases and assumptions were overcome.
- Unequal access to business credit was cited as another obstacle to M/WBEs obtaining City work.
- To overcome any race- and/or gender-based barriers, the vast majority of minority and women owners and stakeholder representatives were adamant that contract goals are necessary to ensure they have full and fair opportunities to compete.
- The exclusion of White women from the City's program based on the recommendations of an earlier disparity study has eliminated their opportunities to work on City projects.

G. Recommendations

The quantitative and qualitative data presented in this Study provide a thorough examination of the evidence regarding the experiences of minority- and women-owned firms operating in the City of Fort Worth's geographic and procurement markets. As required by strict scrutiny, we analyzed evidence of such firms' utilization by the City as measured by dollars spent. We also examined business owners' experiences in obtaining City contracts and associated subcontracts, and opportunities in the private sector. We gathered statistical and anecdotal data to provide the evidence necessary to determine whether there is a strong basis in evidence that barriers to full and equal contracting opportunities exist on the basis of race or gender in the City's market area that circumscribe City contract opportunities, and if so, what narrowly tailored remedies are appropriate.

The Study results support the City's continuing compelling interest in implementing its race- and gender-conscious Business Diversity Enterprise ("BDE") program. The statistical data and the anecdotal testimony provide a sufficient basis for the continued use of narrowly tailored remedial race- and gender-based measures to ensure full and fair access by all firms to City prime contracting and associated subcontracting opportunities.

We therefore suggest enhancements to the City's existing measures and new initiatives to increase opportunities for M/WBEs and other small businesses. The fol-

lowing recommendations seek to provide guidance to ensure the programs conform to strict scrutiny and national best practices for M/WBE programs.

1. Enhance Race- and Gender-Neutral Measures

Implement Additional Features of the City's Electronic Contracting Data Collection and Monitoring System: Using its newly implemented B2Gnow electronic data collection and monitoring system, the City should continue to refine its data collection process to ensure that data entry is complete. This would greatly assist the City administering the program and reduce the manual manipulation of information in future studies.

In addition, the City should implement a contract/project-specific goal setting module that is available as part of the current system. This will allow the City to set narrowly tailored goals using the data from this study as a starting point. This will not only tie the program's implementation to its evidentiary basis but also increase consistency and transparency of the contract goal setting process.

Another enhancement of the system's functionality would be to allow prime vendors to submit verified subcontractor utilization plans online. This should reduce the time for review of plans and the burdens of record keeping.

Increase Outreach to M/WBEs: The City currently participates in vendor fairs and other outreach events hosted by local government agencies. While M/WBEs and small firms found these to be somewhat useful, several business owners suggested more meetings focusing on specific City projects or for specific industries, such as engineering services.

Increase Contract "Unbundling": The size and complexity of many of the City's contracts are major impediments to M/WBEs and other small firms in obtaining work as prime contractors and as subcontractors. "Unbundling" contracts into smaller segments was endorsed by many firm owners as one method to provide fair access to City projects. Reviewing specific procurement needs through the lens of small businesses can lead to reduced barriers across many City departments. In conjunction with reduced insurance and bonding requirements where possible, unbundled contracts would permit smaller firms to move from quoting solely as subcontractors to bidding as prime contractors, as well as enhance their subcontracting opportunities. Unbundling must be conducted, however, within the constraints of the need to ensure efficiency and limit costs to taxpayers, as well as any state law requirements.

Review Contract Requirements: The City should consider accepting equivalent experience when evaluating bids or proposals that are not awarded solely on the basis of price. This can include an individual's experience at an earlier firm, such as an owner who has transitioned from employee to entrepreneur, or

work performed on projects similar though not identical to the services sought in the City’s solicitation. The City should also examine its current prequalification policies to review the criteria so that they are no more restrictive or burdensome than is absolutely necessary. It is also important to ensure that the Office of Business Diversity is aware of those requirements so that certified firms will not miss out on opportunities because of a lack of coordination between City departments.

Provide Training to City Staff: Fort Worth has evinced a strong commitment to diversity and inclusion and training is an important step in institutionalizing these values. To actualize these commitments, training will be valuable to City employees with responsibilities for contracting and procurement and vendor interface on new initiatives. It is also an opportunity to again stress the importance of diversity and inclusion and ensure that the program is “owned” by all departments, not just the Office of Business Diversity. In addition, the City should consider providing unconscious or implicit bias training for all City staff.⁴ Such training should raise awareness and understanding to work toward making the City of Fort Worth a model of diversity and inclusion.

2. Revise the Business Diversity Enterprise Program

The study’s results support the determination that the City has a strong basis in evidence to implement race- and gender-conscious remedies. The record—both quantitative and qualitative—establishes that M/WBEs in the City’s market area continue to experience significant disparities in their access to City contracts and private sector opportunities and to those factors necessary for business success. Even with the use of limited contract goals for only certain groups (based on the prior Disparity Study), M/WBEs as a group have not reached parity on City-funded jobs. The results for Black-owned and Native-American-owned firms are particularly stark. Without the use of contract goals to level the playing field, the City might function as a “passive participant” in the “market failure” of discrimination.

Further, the economy-wide analyses in Chapter V reveal that in the overall DFW Metroplex economy, where contracting equity programs are rare as a portion of total economic activity, M/WBEs experience very large and significant disparities to full and fair chances to entrepreneurial success. The data show minorities and women form businesses at rates well below white men and earn significantly less from the businesses they do form. They also experience large disparities in the ratios of their sales and their payrolls relative to the number of their firms.

4. “Implicit bias” is attitudes and stereotypes that influence judgment, decision-making, and behavior in ways that are outside of conscious awareness and/or control. See <https://implicit.harvard.edu>.

The anecdotal data also suggest that the playing field for City opportunities is not yet level. Reports of inadequate access to information, biased perceptions, entrenched and closed networks, lack of access to capital and bonding, restrictive experience requirements, and other impediments on the basis of, or exacerbated by, race and gender continue impede M/WBEs' success. While the City's program has been successful in overcoming these barriers for some members of groups in some industries, the experiences of most M/WBEs in most industries as well as outside of contracting affirmative action programs strongly suggests that flexible contract goals are still warranted. We therefore recommend the continued implementation of a race- and gender-conscious program and the inclusion of all groups for credit towards meeting contract goals in all industries.

Use the Study to Set the M/WBE Annual Goal: The weighted availability estimates in Chapter IV should be the basis for consideration of overall, annual spending targets for City funds. We found the availability of M/WBEs to be 25.4 percent.

Use the Study to Set Narrowly Tailored Contract Specific Goals: The City's constitutional responsibility is to ensure that goals are narrowly tailored to the specifics of the project and to the geographic and procurement marketplace. We therefore urge the City to jettison the current approach of a patchwork of broad industry or category goals (*i.e.*, construction, professional services, good and services and architectural and engineering services) in favor of a constitutionally defensible, narrowly tailored approach to contract goal setting. Not only are these generic categories somewhat arbitrary but also by not reviewing the actual scopes of work, the goal may well be inapposite to the actual work performed.

Goals should be set not only for subcontracting tasks but for the entire scope of work of the project. Not only is there no legal requirement to constrict the program in this manner but also it is prime work that is the most difficult for M/WBEs to achieve. A "subcontracting" only contract goal locks in the very barriers sought to be overcome because it forces M/WBE prime contractors to subcontract out work they could self-perform and thereby grow their skills and revenues. This will also simplify and bolster the legality of the administration of the program, by eliminating extra points that are sometimes given to certified firms that depend on the form of their contractual relationships with other parties (e.g., joint venture agreements versus subcontracting agreements).

The highly detailed availability estimates in Chapter IV can serve as the starting point for narrowly tailored contract goal setting that reflects the percentage of available M/WBEs to perform the specific scopes of work of the contract as a percentage of the total pool of available firms. To facilitate the process, the City should use the B2GNow electronic data collection and monitoring sys-

tem's contract goal setting module as a starting point for goal setting. We have worked extensively with this firm to develop a simple, defensible methodology that uses the study data. The unweighted availability estimates should be weighted by the expected scopes of the particular contract, including the prime vendor's anticipated self-performance. The City should then review the results in light of other factors, such as the entry of new firms into the program, other current Fort Worth area projects that may impact availability, progress towards meeting the annual goals, any unique aspects to the scopes, or other relevant factors. Any adjustment to the calculated goal should be fully documented. Written policies explaining the contract goal setting steps should be disseminated so that all contracting actors understand the methodology.

We further suggest that the City no longer give evaluation "points" to M/WBEs who submit qualifications-based proposals and permit certified firms to count their own participation towards meeting the contract goal as recommended below. This inflexible remedy may run afoul of the court-imposed requirement that a proposer making good faith efforts to meet the goal be treated the same way as one that might meet the goal, since only minority or women firms can receive these points.

In addition, the City should consider bidding some contracts that it determines have significant opportunity for M/WBE participation without goals. These "control contracts" can illuminate whether certified firms are used or even solicited in the absence of goals. The development of some "unremediated" markets data (*i.e.*, contracts without goals), as held by the courts, will be probative of whether the M/WBE utilization is the result of the City's program or whether barriers on the basis of race or gender have been eliminated.

Count Certified Prime Vendors' Performance Towards Meeting Contract Goals: The City should consider following national trends and rescind the prohibition on certified prime M/WBEs counting their own participation towards contract goals. This will accomplish several objectives. First, it is one of the few remedies available to remove barriers to the participation of minorities and women as prime firms, as set-asides on the basis of race or gender are unlikely to survive judicial scrutiny. Next, it supports the creation of additional capacity in these firms, so that when they graduate from the program, they do not lose most (or even all) of their work because they can no longer be counted by other prime businesses towards meeting contract goals. Third, it clarifies that all contract dollars will be subject to the goal, not just the dollars anticipated to be spent with subcontractors. Finally, it more closely mirrors the way many industries function outside the operations of contracting affirmative action programs. Permitting certified prime firms to count their own participation gives them the ability to grow within the usual parameters of their industries.

Review Program Policies, Procedures and Forms: To implement the new goals and contract goal setting methodology, the City should review all its current program components, including policies, procedures and forms. We suggest the following program elements, at minimum, be revised to reflect the findings in this Report and national best practices for M/WBE programs. These include:

- Specification development that encompasses input of the Office of Business Diversity staff in development of solicitations.
- Special provisions and instructions to bidders about the program to ensure that changes are clear, and standards and requirements are fully spelled out, including the types of sanctions that may be imposed for non-compliance or contract breach.
- Definitions for “commercially useful function” and how M/WBE participation will be counted towards credit for meeting contract goals.
- Criteria for establishing the “good faith efforts” of bidders who are unable to meet the goal. Standards for such “waivers” must be clear, with a fully delineated process to appeal adverse determinations.
- Standards for contract performance, including substituting non-performing certified firms; reporting compliance; and seeking assistance from the BDE Office.
- Contract closeout procedures and standards for determining that the contractor has met its affirmative action obligations.

Implement the Mentor-Protégé Program: Fort Worth has drafted new Mentor-Protégé initiative that has not yet been implemented. In addition to the proposed elements, we suggest adding some aspects of the model developed for the U.S. Department of Transportation’s Disadvantaged Business Enterprise program. These elements provide support for M/WBEs while incentivizing the mentor to provide the types of assistance that produce identified and achievable goals.

Conduct Regular BDE Program Reviews: The City should conduct a full and thorough review of the evidentiary basis for the Program approximately every five to seven years to meet the requirements of strict constitutional scrutiny and ensure best practices in program administration. A sunset date for the BDE program, when it will end unless reauthorized, is a constitutional requirement to meet the narrow tailoring test that race-and gender-conscious measures be used only when necessary. A new disparity study or other applicable research should be commissioned in time to meet the sunset date.

Develop Performance Measures for Program Success: The City should develop quantitative performance measures for certified firms and the overall success

of the program to evaluate its effectiveness in reducing the systemic barriers identified by the study. In addition to meeting the annual goal(s), possible benchmarks might include, the number of bids or proposals and the dollar amount of the awards, the goal shortfall where the bidder submitted good faith efforts to meet the contract goal; the number and dollar amount of bids or proposals rejected as non-responsive for failure to make good faith efforts to meet the goal; the number, type, and dollar amount of M/WBE substitutions during contract performance; increased bidding by certified firms; increased prime contract awards to certified firms; and increased “capacity” of certified firms as measured by bonding limits such as size of jobs or profitability.

II. LEGAL STANDARDS FOR CONTRACTING AFFIRMATIVE ACTION PROGRAMS

A. Summary of Constitutional Equal Protection Standards

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

1. The government must establish its “compelling interest” in remediating race discrimination by current “strong evidence” of the persistence of discrimination. Such evidence may consist of the entity’s “passive participation” in a system of racial exclusion.
2. Any remedies adopted must be “narrowly tailored” to that discrimination; the program must be directed at the types and depth of discrimination identified.⁵

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

1. Statistical evidence of the underutilization of minority or women firms by the agency and/or throughout the agency’s geographic and industry market area compared to their availability in the market area. These are disparity indices, comparable to the type of “disparate impact” analysis used in employment discrimination cases.
2. Anecdotal evidence of race- or gender-based barriers to the full and fair participation of minority- and women-owned firms in the market area or in seeking contracts with the agency, comparable to the “disparate treatment” analysis used in employment discrimination cases.⁶ Anecdotal data can consist of interviews, surveys, public hearings, academic literature, judicial decisions, legislative reports, and other information.

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

6. *Id.* at 509.

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

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

In *Adarand v. Peña*,⁷ the United States Supreme Court extended the analysis of strict scrutiny to race-based federal enactments such as the United States Department of Transportation (“USDOT”) Disadvantaged Business Enterprise (“DBE”) program for federally assisted transportation contracts.

State and local governments, must have a compelling governmental interest for the use of race, and the remedies adopted must be narrowly tailored to that evidence.⁸

Most federal courts, including the Fifth Circuit,⁹ have subjected preferences for Women-Owned Business Enterprises (“WBEs”) to “intermediate scrutiny”. Gender-based classifications must be supported by an “exceedingly persuasive justification” and be “substantially related to the objective”.¹⁰ However, appellate courts have applied strict scrutiny to the gender-based presumption of social disadvantage in reviewing the constitutionality of the DBE program¹¹ or held that the results would be the same under strict scrutiny.¹²

Classifications not based upon a suspect class (race, ethnicity, religion, national origin or gender) are subject to the lesser standard of review called “rational basis” scrutiny.¹³ The courts have held there are no equal protection implications under the Fourteenth Amendment of the United States Constitution for groups not subject to systemic discrimination.¹⁴ In contrast to strict scrutiny and to intermediate

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

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

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

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

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

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

13. See, generally, *Coral Construction Co v. King County*, 941 F. 2d 910 (9th Cir. 1991); *Equal. Found. v. City of Cincinnati*, 128 F. 3d 289 (6th Cir. 1997).

scrutiny, rational basis means the governmental action must be “rationally related” to a “legitimate” government interest.¹⁵ Thus, preferences for persons with disabilities or veteran status may be enacted with vastly less evidence than that required for race- or gender-based measures to combat historic discrimination.¹⁶

Unlike most legal challenges, the defendant bears the initial burden of producing “strong evidence” in support of its race-conscious program.¹⁷ As held by the Fifth Circuit, the plaintiff must then proffer evidence to rebut the government’s case, and bears the ultimate burden of production and persuasion that the affirmative action program is unconstitutional.¹⁸ “[W]hen the proponent of an affirmative action plan produces sufficient evidence to support an inference of discrimination, the plaintiff must rebut that inference in order to prevail.”¹⁹

A plaintiff “cannot meet its burden of proof through conjecture and unsupported criticism of [the government’s] evidence.”²⁰ To successfully rebut the government’s evidence, a plaintiff must introduce “credible, particularized evidence” that rebuts the government’s showing of a strong basis in evidence.²¹ For example, in the challenge to the Minnesota and Nebraska DBE programs, “plaintiffs presented evidence that the data was susceptible to multiple interpretations, but they failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in federally assisted highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.”²² When the statistical information is sufficient to support the inference of discrimination, the plaintiff must prove that the statistics are flawed.²³ A plaintiff cannot rest upon general criticisms of studies or other related evidence; it must meet its burden that the government’s proof is inadequate to meet strict scrutiny, rendering the legislation or government program illegal.²⁴

14. *United States v. Carolene Products Co.*, 304 U.S. 144 (1938).

15. *Heller v. Doe*, 509 U.S. 312, 320 (1993).

16. The standard applicable to status based on sexual orientation of gender identity has not yet been clarified by the courts.

17. *Aiken v. City of Memphis*, 37 F.3d 1155, 1162 (6th Cir. 1994).

18. *Scott*, 199 F.3d at 219; *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1166 (10th Cir. 2000), cert. granted, 532 U.S. 941, then dismissed as improvidently granted, 534 U.S. 103 (2001) (“*Adarand VII*”).

19. *Engineering Contractors Association of South Florida, Inc. v. Metropolitan Dade County*, 122 F.3d 895, 916 (11th Cir. 1997) (“*Engineering Contractors II*”).

20. *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 989 (10th Cir. 2003), cert. denied, 540 U.S. 1027 (2003) (“*Concrete Works IV*”).

21. *H.B. Rowe Co., Inc. v. Tippet*, 615 F.3d 233, 241-242 (4th Cir. 2010); *Midwest Fence Corp. v. U.S. Department of Transportation*, 84 F. Supp. 3d 705 (N.D. Ill. 2015), affirmed, 840 F.3d 932 (7th Cir. 2016) (“*Midwest Fence II*”).

22. *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d 964, 970 (8th Cir. 2003), cert. denied, 541 U.S. 1041 (2004).

23. *Coral Construction Co.*, 941 F. 2d at 921; *Engineering Contractors II*, 122 F.3d at 916.

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

B. Elements of Strict Scrutiny

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

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

The Plan was adopted following a public hearing during which no direct evidence was presented that the City had discriminated on the basis of race in contracts or that its prime contractors had discriminated against minority subcontractors. The only evidence before the City Council was: (a) Richmond’s population was 50 percent Black, yet less than one percent of its prime construction contracts had been awarded to minority businesses; (b) local contractors’ associations were virtually

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

all White; (c) the City Attorney’s opinion that the Plan was constitutional; and (d) generalized statements describing widespread racial discrimination in the local, Virginia, and national construction industries.

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

[A] state or local subdivision...has the authority to eradicate the effects of private discrimination within its own legislative jurisdiction.... [Richmond] can use its spending powers to remedy private discrimination, if it identifies that discrimination with the particularity required by the Fourteenth Amendment...[I]f the City could show that it had essentially become a “passive participant” in a system of racial exclusion ...[it] could take affirmative steps to dismantle such a system.”²⁵

Strict scrutiny of race-based remedies is required to determine whether racial classifications are in fact motivated by notions of racial inferiority or blatant racial politics. This highest level of judicial review “smokes out” illegitimate uses of race by ensuring that the legislative body is pursuing an important enough goal to warrant use of a highly suspect tool.²⁶ It also ensures that the means chosen “fit” this compelling goal so closely that there is little or no likelihood that the motive for the classification was illegitimate racial prejudice or stereotype. The Court made clear that strict scrutiny is designed to expose racial stigma; racial classifications are said to create racial hostility if they are based on notions of racial inferiority.

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

According to Justice O’Connor, the extremely low MBE membership in local contractors’ associations could be explained by “societal” discrimination or perhaps Blacks’ lack of interest in participating as business owners in the construction industry. To be relevant, the City would have to demonstrate statistical disparities between eligible MBEs and actual membership in trade or professional groups. Further, Richmond presented no evidence concerning enforcement of its own

25. 488 U.S. at 491-92.

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

anti-discrimination ordinance. Finally, the City could not rely upon Congress' determination that there has been nationwide discrimination in the construction industry. Congress recognized that the scope of the problem varies from market to market, and, in any event, it was exercising its powers under Section Five of the Fourteenth Amendment. Local governments are further constrained by the Amendment's Equal Protection Clause.

In the case at hand, the City has not ascertained how many minority enterprises are present in the local construction market nor the level of their participation in City construction projects. The City points to no evidence that qualified minority contractors have been passed over for City contracts or subcontracts, either as a group or in any individual case. Under such circumstances, it is simply impossible to say that the City has demonstrated "a strong basis in evidence for its conclusion that remedial action was necessary."²⁷

This analysis was applied only to Blacks. The Court emphasized that there was "absolutely no evidence" of discrimination against other minorities. "The random inclusion of racial groups that, as a practical matter, may have never suffered from discrimination in the construction industry in Richmond, suggests that perhaps the City's purpose was not in fact to remedy past discrimination."²⁸

Having found that Richmond had not presented evidence in support of its compelling interest in remediating discrimination—the first prong of strict scrutiny—the Court made two observations about the narrowness of the remedy—the second prong of strict scrutiny. First, Richmond had not considered race-neutral means to increase MBE participation. Second, the 30 percent quota had no basis in evidence, and was applied regardless of whether the individual MBE had suffered discrimination.²⁹ The Court noted that the City "does not even know how many MBEs in the relevant market are qualified to undertake prime or subcontracting work in public construction projects."³⁰

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

Nothing we say today precludes a state or local entity from taking action to rectify the effects of identified discrimination within its jurisdiction. If the City of Richmond had evidence before it that non-minority contractors were systematically excluding minority businesses

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

28. *Id.*

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

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

from subcontracting opportunities, it could take action to end the discriminatory exclusion. Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality's prime contractors, an inference of discriminatory exclusion could arise. Under such circumstances, the City could act to dismantle the closed business system by taking appropriate measures against those who discriminate based on race or other illegitimate criteria. In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion... Moreover, evidence of a pattern of individual discriminatory acts can, if supported by appropriate statistical proof, lend support to a local government's determination that broader remedial relief is justified.³¹

While much has been written about *Croson*, it is worth stressing what evidence was and was not before the Court. First, Richmond presented *no* evidence regarding the availability of MBEs to perform as prime contractors or subcontractors and *no* evidence of the utilization of minority-owned subcontractors on City contracts.³² Nor did Richmond attempt to link the remedy it imposed to any evidence specific to the program; it used the general population of the City rather than any measure of business availability.

Some commentators have taken this dearth of any particularized proof and argued that only the most particularized proof can suffice in all cases. They leap from the Court's rejection of Richmond's reliance on only the percentage of Blacks in the City's population to a requirement that only firms that bid or have the "capacity" or "willingness" to bid on a particular contract at a particular time can be considered in determining whether discrimination against Black businesses infects the local economy.³³

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

[I]t is important to remember what the *Croson* plurality opinion did and did not decide. The Richmond program, which the *Croson* Court struck down, was insufficient because it was based on a comparison of the minority population in its entirety in Richmond, Virginia (50%) with the number of contracts awarded to minority businesses (.67%). There were no statistics presented regarding the number of minority-owned

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

32. *Id.* at 502.

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

contractors in the Richmond area, *Croson*, 488 U.S. at 499, and the Supreme Court was concerned with the gross generality of the statistics used in justifying the Richmond program. There is no indication that the statistical analysis performed by [the consultant] in the present case, which does contain statistics regarding minority contractors in New York City, is not sufficient as a matter of law under *Croson*.³⁴

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

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

C. Establishing a "Strong Basis in Evidence" for the City of Fort Worth's Minority- and Women-Owned Business Enterprise Program

The case law on the DBE program should guide the City's program for locally funded contracts. Whether the program is called an M/WBE program or a DBE program or any other moniker, the strict scrutiny test applies. As discussed, 49 C.F.R. Part 26 has been upheld by every court, and local programs for Minority- and Women-Owned Business Enterprises ("M/WBEs") will be judged against this legal framework.³⁵ We note that programs for veterans, persons with disabilities, preferences based on geographic location or truly race- and gender-neutral small business efforts are not subject to strict scrutiny and no evidence comparable to that in a disparity study is needed to enact such initiatives.

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

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

It is well established that disparities between an agency's utilization of M/WBEs and their availability in the relevant marketplace provide a sufficient basis for the consideration of race- or gender-conscious remedies. Proof of the disparate impacts of economic factors on M/WBEs and the disparate treatment of such firms by actors critical to their success will meet strict scrutiny. Discrimination must be shown using statistics and economic models to examine the effects of systems or markets on different groups, as well as by evidence of personal experiences with discriminatory conduct, policies or systems.³⁶ Specific evidence of discrimination or its absence may be direct or circumstantial and should include economic factors and opportunities in the private sector affecting the success of M/WBEs.³⁷

Crosby's admonition that "mere societal" discrimination is not enough to meet strict scrutiny is met where the government presents evidence of discrimination in the industry targeted by the program. "If such evidence is presented, it is immaterial for constitutional purposes whether the industry discrimination springs from widespread discriminatory attitudes shared by society or is the product of policies, practices, and attitudes unique to the industry... The genesis of the identified discrimination is irrelevant." There is no requirement to "show the existence of specific discriminatory policies and that those policies were more than a reflection of societal discrimination."³⁸

The City of Fort Worth need not prove that it is itself guilty of discrimination to meet its burden. In upholding Denver's M/WBE construction program, the court stated that Denver can show its compelling interest by "evidence of private discrimination in the local construction industry coupled with evidence that it has become a passive participant in that discrimination...[by] linking its spending practices to the private discrimination."³⁹ Denver further linked its award of public dollars to discriminatory conduct through the testimony of M/WBEs that identified general contractors who used them on City projects with M/WBE goals but refused to use them on private projects without goals.

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

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

37. *Id.*

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

39. *Id.* at 977.

1. Define the City of Fort Worth’s Market Areas

The first step is to determine the market area in which the City operates. *Croson* states that a state or local government may only remedy discrimination within its own contracting market area. The City of Richmond was specifically faulted for including minority contractors from across the country in its program, based on national data considered by Congress.⁴⁰ The City must therefore empirically establish the geographic and product dimensions of its contracting and procurement market area to ensure that the program meets strict scrutiny. This is a fact driven inquiry; it may or may not be the case that the market area is the government’s jurisdictional boundaries.⁴¹

A commonly accepted definition of geographic market area for disparity studies is the locations that account for at least 75 percent of the agency’s contract and subcontract dollar payments.⁴² Likewise, the accepted approach is to analyze those detailed industries that make up at least 75 percent of the prime contract and associated subcontract payments for the study period.⁴³ This produces the utilization results within the geographic market area.

2. Examine Disparities between the City of Fort Worth’s Utilization of M/WBEs and M/WBE Availability

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

Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality’s prime contractors, an inference of discriminatory exclusion could arise... In the extreme case, some form of narrowly tailored racial preference might be necessary to break down patterns of deliberate exclusion.⁴⁴

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

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

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

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

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

This is known as the “disparity ratio” or “disparity index”. A disparity ratio measures the participation of a group in the government’s contracting opportunities by dividing that group’s utilization by the availability of that group and multiplying that result by 100. Courts have looked to disparity indices in determining whether strict scrutiny is satisfied.⁴⁵ An index less than 100 percent indicates that a given group is being utilized less than would be expected based on its availability, and courts have adopted the Equal Employment Opportunity Commission’s “80 percent” rule that a ratio less than 80 percent presents a *prima facie* case of discrimination.⁴⁶ Where possible, statistical techniques are applied to examine whether any disparities are significant. In addition to creating the disparity ratio, correct measures of availability are necessary to determine whether discriminatory barriers depress the formation of firms by minorities and women, and the success of such firms in doing business in both the private and public sectors, known as an “economy-wide” analysis.⁴⁷

To determine disparity ratios once utilization has been established, the next step is to calculate the availability of minority- and women-owned firms in the government’s market area. Based on the product and geographic utilization data, the study should calculate weighted M/WBE availability estimates of ready, willing and able firms in the City’s market. This is generally the “Custom Census” methodology recommended in the National Study Guidelines and repeatedly approved by the courts. This methodology includes both certified firms and non-certified firms owned by minorities or women.⁴⁸

The Custom Census involves the following steps: 1. Develop directories of M/WBEs. 2. Define a subset of business data to establish the availability of all firms. 3. Merge the directory with the contract data file created during the utilization analysis. 4. Assign race, gender and 6-digit North American Industry Classification System codes. This analysis results in an overall availability estimate of the number of ready, willing and able M/WBEs that is a narrowly tailored, dollar-weighted average of all the underlying industry availability numbers, with larger weights applied to industries with relatively more spend-

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

46. 29 C.F.R. § 1607.4(D) (“A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact.”); see, *Engineering Contractors II*, 122 F3d at 914.

47. *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2005 U.S. Dist. LEXIS 19868, at *70 (Sept. 8, 2005) (“*Northern Contracting II*”) (IDOT’s custom census approach was supportable because “discrimination in the credit and bonding markets may artificially reduce the number of M/WBEs”).

48. See “*National Disparity Study Guidelines*,” Chapter III, pp. 33-34.

ing and lower weights applied to industries with relatively less spending. The availability figures should also be sub-divided by race, ethnicity, and gender.

This approach has several benefits. As held by the federal court of appeals in finding the Illinois Department of Transportation's program to be constitutional, the "remedial nature of [DBE programs] militates in favor of a method of D/M/W/SBE availability calculation that casts a broader net" than merely using bidders lists or other agency or government directories. A broad methodology is also recommended by the USDOT for the federal DBE program, which has been upheld by every court.⁴⁹

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

Many plaintiffs have argued that studies must somehow control for "capacity" of M/WBEs to perform specific agency contracts. The definition of "capacity" has varied based upon the plaintiff's particular point of view, but it has generally meant firm age, firm size (full time employees), firm revenues, bonding limits and prior experience on agency projects (no argument has been made outside of the construction industry).

This test has been rejected by the courts when directly addressed by the plaintiff and the agency. As recognized by the courts and the National Model Disparity Study Guidelines, these capacity factors are not race- and gender-neutral variables. Discriminatory barriers depress the formation of firms by minorities and women, and the success of such firms in doing business in both the private and public sectors. In a perfectly discriminatory system, M/WBEs would have no "capacity" because they would have been prevented from developing any "capacity". That certainly would not mean that there was no discrimination or that the government must sit by helplessly and continue to award tax dollars within the "market failure" of discrimination and without recognition of systematic, institutional race- and gender-based barriers. It is these types of "capacity" variables where barriers to full and fair opportunities to compete will be manifested. Capacity limitations on availability would import the current effects of past discrimination into the model, because if M/WBEs are newer or smaller because of discrimination, then controlling for those vari-

49. See "Tips for Goal Setting in the Disadvantaged Business Enterprise (DBE) Program", https://www.transportation.gov/sites/dot.gov/files/docs/Tips_for_Goal-Setting_in_DBE_Program_20141106.pdf.

ables will mask the phenomenon of discrimination that is being studied. In short, identifiable indicators of capacity are themselves impacted and reflect discrimination. The courts have agreed. Based on expert testimony, judges understand that factors such as size and experience reflect outcomes influenced by race and gender: “M/WBE construction firms are generally smaller and less experienced *because* of discrimination.”⁵⁰

To rebut this framework, a plaintiff must proffer its own study showing that the disparities disappear when whatever variables it believes are important are held constant and that controlling for firm specialization explained the disparities.⁵¹ Additionally, *Croson* does not “require disparity studies that measure whether construction firms are able to perform a *particular contract*.”⁵²

There are also practical reasons not to attempt to circumscribe availability through “capacity” limitations. First, there is no agreement on what variables are relevant or how those variables are to be measured for the purpose of examining whether race and gender barriers impede the success of minority and women entrepreneurs. For example, a newly formed firm might be the result of a merger of much older entities or have been formed by highly experienced owners; it is unclear how such variations would shed light on the issues in a disparity study. Second, since the amount of necessary capacity will vary from contract to contract, there is no way to establish universal standards that would satisfy the capacity limitation. Third, firms’ capacities are highly elastic. Businesses can add staff, rent equipment, hire subcontractors or take other steps to be able to perform a particular scope on a particular contract. Whatever a firm’s capacity might have been at the time of the study, it may well have changed by the time the agency seeks to issue a specific future solicitation. Fourth, there are no reliable data sources for the type of information usually posited as important by those who seek to reduce availability estimates using capacity factors. While a researcher might have information about firms that are certified as M/WBEs or that are prequalified by an agency (which usually applies only to construction firms), there is no database for that information for non-certified firms, especially white male-owned firms that usually function as subcontractors. Any adjustment to the numerator (M/WBEs) must also be made to the denominator (all firms), as a researcher cannot assume that all white male-owned firms have adequate capacity but that M/WBEs do not.

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

51. Conjecture and unsupported criticism of the government are not enough. The plaintiff must rebut the government’s evidence and introduce “credible, particularized evidence” of its own. See *Midwest Fence II*, 840 F.3d 942 (7th Cir. 2016) (upholding the Illinois Tollway’s program for state-funded contracts modeled after Part 26 and based on CHA’s expert testimony).

52. *Croson*, 488 U.S. at 508 (emphasis in the original).

Capacity variables should be examined at the economy-wide level of business formation and earnings, discussed in Chapter V, not at the first stage of the analysis, to reduce the downward bias that discrimination imposes on M/WBEs' availability and the upward bias enjoyed by non-M/WBEs. These factors should also be explored during anecdotal data collection, discussed in Chapter VI. They are also relevant to contract goal setting, where the agency must use its judgment about whether to adjust the initial goal that results from the study data based on current market conditions and current firm availability, discussed in Chapter VII.

The City of Fort Worth need not prove that the statistical inferences of discrimination are "correct." In upholding Denver's M/WBE Program, the Tenth Circuit noted that strong evidence supporting Denver's determination that remedial action was necessary need not have been based upon "irrefutable or definitive" proof of discrimination. Statistical evidence creating inferences of discriminatory motivations was sufficient and therefore evidence of market area discrimination was properly used to meet strict scrutiny. To rebut this type of evidence, the plaintiff must prove by a preponderance of the evidence that such proof does not support those inferences.⁵³

Nor must the City demonstrate that the "ordinances will *change* discriminatory practices and policies" in the local market area; such a test would be "illogical" because firms could defeat the remedial efforts simply by refusing to cease discriminating.⁵⁴

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

Denver's only burden was to introduce evidence which raised the inference of discriminatory exclusion in the local construction industry and link its spending to that discrimination.... Denver was under no burden to identify any specific practice or policy that resulted in discrimination. Neither was Denver required to demonstrate that the purpose of any such practice or policy was to disadvantage women or minorities. To impose such a burden on a municipality would be tantamount to requiring proof of discrimination and would eviscerate any reliance the municipality could place on statistical studies and anecdotal evidence.⁵⁵

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

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

55. *Id.* at 971.

Similarly, statistical evidence by its nature cannot identify the individuals responsible for the discrimination; there is no need to do so to meet strict scrutiny, as opposed to an individual or class action lawsuit.⁵⁶

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

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

demonstrates the existence of two kinds of discriminatory barriers to minority subcontracting enterprises, both of which show a strong link between racial disparities in the federal government's disbursements of public funds for construction contracts and the channeling of those funds due to private discrimination. The first discriminatory barriers are to the formation of qualified minority subcontracting enterprises due to private discrimination, precluding from the outset competition for public construction contracts by minority enterprises. The second discriminatory barriers are to fair competition between minority and non-minority subcontracting enterprises, again due to private discrimination, precluding existing minority firms from effectively competing for public construction contracts. The government also presents further evidence in the form of local disparity studies of minority subcontracting and studies of local subcontracting markets after the removal of affirmative action programs.... The government's evidence is particularly striking in the area of the race-based denial of access to capital, without which the formation of minority subcontracting enterprises is stymied.⁵⁷

Business discrimination studies and lending formation studies are relevant and probative because they show a strong link between the disbursement of public funds and the channeling of those funds due to private discrimination. "Evi-

56. *Id.* at 973.

57. *Adarand VII*, 228 F.3d 1147, 1168-69 (10th Cir. 2000), *cert. granted*, 532 U.S. 941, *then dismissed as improvidently granted*, 534 U.S. 103 (2001).

dence that private discrimination results in barriers to business formation is relevant because it demonstrates that M/WBEs are precluded at the outset from competing for public construction contracts. Evidence of barriers to fair competition is also relevant because it again demonstrates that *existing* M/WBEs are precluded from competing for public contracts.”⁵⁸ Despite the contentions of plaintiffs that possibly dozens of factors might influence the ability of any individual to succeed in business, the courts have rejected such impossible tests and held that business formation studies are not flawed because they cannot control for subjective descriptions such as “quality of education,” “culture” and “religion.”

For example, in unanimously upholding the DBE Program for federal-aid transportation contracts, the courts agree that disparities between the earnings of minority-owned firms and similarly situated non-minority-owned firms and the disparities in commercial loan denial rates between Black business owners compared to similarly situated non-minority business owners are strong evidence of the continuing effects of discrimination.⁵⁹ The Eighth Circuit Court of Appeals took a “hard look” at the evidence Congress considered, and concluded that the legislature had

spent decades compiling evidence of race discrimination in government highway contracting, of barriers to the formation of minority-owned construction businesses, and of barriers to entry. In rebuttal, [the plaintiffs] presented evidence that the data were susceptible to multiple interpretations, but they failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.⁶⁰

4. Evaluate Anecdotal Evidence of Race- and Gender-Based Barriers

A study should further explore anecdotal evidence of experiences with discrimination in contracting opportunities because it is relevant to the question of whether observed statistical disparities are due to discrimination and not to

58. *Id.*

59. *Id.*; *Western States*, 407 F.3d at 993; *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2004 U.S. Dist. LEXIS 3226 at *64 (N.D. Ill., Mar. 3, 2004) (“*Northern Contracting I*”).

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

some other non-discriminatory cause or causes. As observed by the Supreme Court, anecdotal evidence can be persuasive because it “brought the cold [statistics] convincingly to life.”⁶¹ Testimony about discrimination practiced by prime contractors, bonding companies, suppliers, and lenders has been found relevant regarding barriers both to minority firms’ business formation and to their success on governmental projects.⁶² While anecdotal evidence is insufficient standing alone, “[p]ersonal accounts of actual discrimination or the effects of discriminatory practices may, however, vividly complement empirical evidence. Moreover, anecdotal evidence of a [government’s] institutional practices that exacerbate discriminatory market conditions are [sic] often particularly probative.”⁶³ “[W]e do not set out a categorical rule that every case must rise or fall entirely on the sufficiency of the numbers. To the contrary, anecdotal evidence might make the pivotal difference in some cases; indeed, in an exceptional case, we do not rule out the possibility that evidence not reinforced by statistical evidence, as such, will be enough.”⁶⁴

There is no requirement that anecdotal testimony be “verified” or corroborated, as befits the role of evidence in legislative decision-making as opposed to judicial proceedings. “Plaintiff offers no rationale as to why a fact finder could not rely on the State’s ‘unverified’ anecdotal data. Indeed, a fact finder could very well conclude that anecdotal evidence need not – indeed cannot – be verified because it ‘is nothing more than a witness’ narrative of an incident told from the witness’ perspective and including the witness’ perception.”⁶⁵ Likewise, the Tenth Circuit held that “Denver was not required to present corroborating evidence and [plaintiff] was free to present its own witnesses to either refute the incidents described by Denver’s witnesses or to relate their own perceptions on discrimination in the Denver construction industry.”⁶⁶

D. Narrowly Tailoring a Minority-Owned and Women-Owned Business Enterprise Procurement Program for the City of Fort Worth

Even if the City has a strong basis in evidence to believe that race-based measures are needed to remedy identified discrimination, the program must still be narrowly tailored to that evidence. As discussed above, programs that closely mirror

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

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

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

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

65. *Id.* at 249.

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

those of the U.S. Department of Transportation’s Disadvantaged Business Enterprise program⁶⁷ have been upheld using that framework.⁶⁸ The courts have repeatedly examined the following factors in determining whether race-based remedies are narrowly tailored to achieve their purpose:

- The efficacy of race-neutral remedies at overcoming identified discrimination;
- The relationship of numerical benchmarks for government spending to the availability of minority- and women-owned firms and to subcontracting goal setting procedures;
- The flexibility of the program requirements, including the provision for good faith efforts to meet goals and contract specific goal setting procedures;
- The congruence between the remedies adopted and the beneficiaries of those remedies;
- Any adverse impact of the relief on third parties; and
- The duration of the program.⁶⁹

1. Consider Race- and Gender-Neutral Remedies

Race- and gender-neutral approaches are necessary components of a defensible and effective M/WBE program⁷⁰ and the failure to seriously consider such remedies has been fatal to several programs.⁷¹ Difficulty in accessing procurement opportunities, restrictive bid specifications, excessive experience requirements, and overly burdensome insurance and/or bonding requirements, for example, might be addressed by the City without resorting to the use of race or gender in its decision-making. Effective remedies include unbundling of contracts into smaller units, providing technical support, and developing programs to address issues of financing, bonding, and insurance important to all small and emerging businesses.⁷² Further, governments have a duty to

67. 49 C.F.R. Part 26.

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

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

70. *Croson*, 488 U.S. at 507 (Richmond considered no alternatives to race-based quota); *Associated General Contractors of Ohio v. Drabik*, 214 F.3d at 738 (6th Cir. 2000) (“*Drabik II*”); *Contractors Association of Eastern Pennsylvania v. City of Philadelphia*, 91 F.3d 586, 609 (3rd Cir. 1996) (“*Philadelphia III*”) (City’s failure to consider race-neutral alternatives was particularly telling); *Webster*, 51 F.Supp.2d at 1380 (for over 20 years County never seriously considered race-neutral remedies); cf. *Aiken*, 37 F.3d at 1164 (failure to consider race-neutral method of promotions suggested a political rather than a remedial purpose).

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

ferret out and punish discrimination against minorities and women by their contractors, staff, lenders, bonding companies or others.⁷³

The requirement that the agency must meet the maximum feasible portion of the goal through race-neutral measures, as well as estimate that portion of the goal that it predicts will be met through such measures, has been central to the holdings that the DBE program regulations meet narrow tailoring.⁷⁴

However, strict scrutiny does not require that every race-neutral approach must be implemented and then proven ineffective before race-conscious remedies may be utilized.⁷⁵ While an entity must give good faith consideration to race-neutral alternatives, “strict scrutiny does not require exhaustion of every possible such alternative...however irrational, costly, unreasonable, and unlikely to succeed such alternative might be... [S]ome degree of practicality is subsumed in the exhaustion requirement.”⁷⁶

2. Set Targeted M/WBE Goals

Numerical goals or benchmarks for M/WBE participation must be substantially related to their availability in the relevant market.⁷⁷ For example, the DBE program regulations require that the overall goal must be based upon demonstrable evidence of the number of DBEs ready, willing, and able to participate on the recipient’s federally assisted contracts.⁷⁸ “Though the underlying estimates may be inexact, the exercise requires the States to focus on establishing realistic goals for DBE participation in the relevant contracting markets. This stands in stark contrast to the program struck down in *Croson*.”⁷⁹

Goals can be set at various levels of particularity and participation. The City may set an overall, aspirational goal for its annual, aggregate spending. Annual goals can be further disaggregated by race and gender. Approaches range from a single M/WBE or DBE goal that includes all racial and ethnic minorities and non-minority⁸⁰ women, to separate goals for each minority group and women.⁸¹

72. See 49 CFR § 26.51.0.

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

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

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

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

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

78. 49 C.F.R. § 26.45 (b)

79. *Id.*

80. See, 49 C.F.R. §26.45(h) (overall goal must not be subdivided into group-specific goals).

The Eighth Circuit has recognized that goal setting is not an absolute science. In holding the DBE regulations to be narrowly tailored, the court noted that “[t]hrough the underlying estimates may be inexact, the exercise requires the States to focus on establishing realistic goals for DBE participation in the relevant contracting markets.”⁸² However, sheer speculation cannot form the basis for an enforceable measure.⁸³

It is settled case law that goals for a particular solicitation should reflect the particulars of the contract, not reiterate annual aggregate targets; goals must be contract specific. “Standard” goals are not defensible. Contract goals must be based upon availability of M/WBEs to perform the anticipated scopes of the contract, location, progress towards meeting annual goals, and other factors. Not only is this legally mandated,⁸⁴ but this approach also reduces the need to conduct good faith efforts reviews, as well as the temptation to create “front” companies and sham participation to meet unreasonable contract goals. While this is more labor intensive than defaulting to the annual, overall goals, there is no option to avoid meeting narrow tailoring because to do so would be more burdensome.

3. Ensure Flexibility of Goals and Requirements

It is imperative that remedies not operate as fixed quotas.⁸⁵ A M/WBE program must provide for contract awards to firms who fail to meet the contract goals but make good faith efforts to do so.⁸⁶ In *Croson*, the Court refers approvingly to the contract-by-contract waivers used in the USDOT’s DBE program.⁸⁷ This feature has been central to the holding that the DBE program meets the narrow tailoring requirement.⁸⁸ Further, firms that meet the goals cannot be favored over those who made good faith efforts and firms that exceed the goals cannot be favored over those that did not exceed the goals.

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

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

83. *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725, 740 (N.D. Ill. 2003) (City’s MBE and WBE goals were “formulistic” percentages not related to the availability of firms).

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

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

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

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

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

4. Review Program Eligibility Over-Inclusiveness and Under-Inclusiveness

The over- or under-inclusiveness of those persons to be included in the City’s program is an additional consideration and addresses whether the remedies truly target the evil identified. The “fit” between the problem and the remedy manifests in three ways: which groups to include, how to define those groups, and which persons will be eligible to be included within those groups.

The groups to include must be based upon the evidence.⁸⁹ The “random inclusion” of ethnic or racial groups that may never have experienced discrimination in the entity’s market area may indicate impermissible “racial politics”.⁹⁰ In striking down Cook County, Illinois’ construction program, the Seventh Circuit remarked that a “state or local government that has discriminated just against blacks may not by way of remedy discriminate in favor of blacks and Asian-Americans and women.”⁹¹ However, at least one court has held some quantum of evidence of discrimination for each group is sufficient; *Croson* does not require that each group included in the ordinance suffer equally from discrimination.⁹² Therefore, remedies should be limited to those firms owned by the relevant minority groups as established by the evidence that have suffered actual harm in the market area.⁹³

Next, the firm’s owner(s) must be disadvantaged. The DBE Program’s rebuttable presumptions of social and economic disadvantage, including the requirement that the disadvantaged owner’s personal net worth not exceed a certain ceiling and that the firm must meet the Small Business Administration’s size definitions for its industry, have been central to the courts’ holdings that it is narrowly tailored.⁹⁴ “[W]ealthy minority owners and wealthy minority-owned firms are excluded, and certification is available to persons who are not presumptively [socially] disadvantaged but can demonstrate actual social and economic disadvantage. Thus, race is made relevant in the program, but it is not a

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

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

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

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

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

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

determinative factor.”⁹⁵ Further, anyone must be able to challenge the disadvantaged status of any firm.⁹⁶

5. Evaluate the Burden on Third Parties

Failure to make “neutral” changes to contracting and procurement policies and procedures that disadvantage M/WBEs and other small businesses may result in a finding that the program unduly burdens non-M/WBEs.⁹⁷ However, “innocent” parties can be made to share some of the burden of the remedy for eradicating racial discrimination.⁹⁸ The burden of compliance need not be placed only upon those firms directly responsible for the discrimination. The proper focus is whether the burden on third parties is “too intrusive” or “unacceptable”.

Burdens must be proven and cannot constitute mere speculation by a plaintiff.⁹⁹ “Implementation of the race-conscious contracting goals for which [the federal authorizing legislation] provides will inevitably result in bids submitted by non-DBE firms being rejected in favor of higher bids from DBEs. Although the result places a very real burden on non-DBE firms, this fact alone does not invalidate [the statute]. If it did, all affirmative action programs would be unconstitutional because of the burden upon non-minorities.”¹⁰⁰

Narrow tailoring does permit certified firms acting as prime contractors to count their self-performance towards meeting contract goals, if the study finds discriminatory barriers to prime contract opportunities and there is no requirement that a program be limited only to the subcontracting portions of contracts. The DBE program regulations provide this remedy for discrimination against DBEs seeking prime work,¹⁰¹ and the regulations do not limit the application of the program to only subcontracts.¹⁰² The trial court in upholding the

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

96. 49 C.F.R. §26.87.

97. *See Engineering Contractors Assoc. of South Florida, Inc. v. Metropolitan Dade County*, 943 F.Supp. 1546, 1581-1582 (S.D. Fla. 1996) (“*Engineering Contractors I*”) (County chose not to change its procurement system).

98. *Concrete Works IV*, 321 F.3d at 973; *Wygant*, 476 U.S. at 280-281; *Adarand VII*, 228 F.3 at 1183 (“While there appears to be no serious burden on prime contractors, who are obviously compensated for any additional burden occasioned by the employment of DBE subcontractors, at the margin, some non-DBE subcontractors such as *Adarand* will be deprived of business opportunities”); *cf. Northern Contracting II*, at *5 (“Plaintiff has presented little evidence that is [sic] has suffered anything more than minimal revenue losses due to the program.”).

99. *Rowe*, 615 F.3d at 254 (prime bidder had no need for additional employees to perform program compliance and need not subcontract work it can self-perform).

100. *Western States*, 407 F.3d at 995.

101. 49 C.F.R. § 26.53(g) (“In determining whether a DBE bidder/offeror for a prime contract has met the contractor goal, count the work the DBE has committed to perform with its own forces as well as the work that it has committed to be performed by DBE subcontractors and suppliers.”).

102. 49 C.F.R. § 26.45(a)(1).

Illinois DOT's DBE program explicitly recognized that barriers to subcontracting opportunities also affect the ability of DBEs to compete for prime work on a fair basis.

This requirement that goals be applied to the value of the entire contract, not merely the subcontracted portion(s), is not altered by the fact that prime contracts are, by law, awarded to the lowest bidder. While it is true that prime contracts are awarded in a race- and gender-neutral manner, the Regulations nevertheless mandate application of goals based on the value of the entire contract. Strong policy reasons support this approach. Although laws mandating award of prime contracts to the lowest bidder remove concerns regarding direct discrimination at the level of prime contracts, the indirect effects of discrimination may linger. The ability of DBEs to compete successfully for prime contracts may be indirectly affected by discrimination in the subcontracting market, or in the bonding and financing markets. Such discrimination is particularly burdensome in the construction industry, a highly competitive industry with tight profit margins, considerable hazards, and strict bonding and insurance requirements.¹⁰³

6. Examine the Duration and Review of the Program

Race-based programs must have duration limits. A race-based remedy must “not last longer than the discriminatory effects it is designed to eliminate.”¹⁰⁴ The unlimited duration and lack of review were factors in the court's holding that the City of Chicago's M/WBE construction program was no longer narrowly tailored; Chicago's program was based on 14-year-old information, which while it supported the program adopted in 1990, no longer was sufficient standing alone to justify the City's efforts in 2004.¹⁰⁵ How old is too old is not definitively answered,¹⁰⁶ but governments would be wise to analyze data at least once every five or six years.

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

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

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

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

In contrast, the USDOT DBE program’s periodic review by Congress has been repeatedly held to provide adequate durational limits.¹⁰⁷ Similarly, “two facts [were] particularly compelling in establishing that [North Carolina’s M/WBE program] was narrowly tailored: the statute’s provisions (1) setting a specific expiration date and (2) requiring a new disparity study every five years.”¹⁰⁸

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

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

III. CITY OF FORT WORTH'S BUSINESS DIVERSITY ENTERPRISE PROGRAM

This chapter describes the City of Fort Worth's Business Diversity Enterprise program and provides the results of interviews with business owners, stakeholder representatives and City staff.

A. City of Fort Worth's Business Diversity Enterprise Program Provisions

The City of Fort Worth's Business Diversity Enterprise (BDE) Ordinance No. 20020-12-2011 (City Code at Chapter 20, Article X) and subsequent amendments govern access to contracting and sub-contracting opportunities offered on the City's locally funded contracts. The BDE Ordinance was adopted in 2011 to remedy the effects of past underutilization of minority and women business enterprises in the Fort Worth marketplace. A 2009 Availability and Disparity Study conducted by Mason Tillman Associates, Ltd. and previous similar studies found disparities in the City's utilization of Minority- and Women-owned Business Enterprises ("M/WBEs") on contracts in the construction, goods and services and professional services industries.

The BDE Ordinance outlines, in detail, the required business diversity initiatives for locally funded contracts for construction, professional services, purchase agreements and any other contracts that the City Council or City Manager determine to be appropriate. The BDE Ordinance includes provisions for the following: certification requirements; program goal setting process (purchases over \$50,000); program criteria for joint ventures; M/WBE Prime Contracts; Small Business Enterprise (SBE) subcontracting; procurements less than \$50,000; applicable contracts; post award compliance; contract monitoring and reporting; exceptions and waivers; program administration; sanctions and severability. The Ordinance does not set an expiration date for the program but does require a review by the City Council every five years to determine whether it remains necessary.

Based on the Ordinance's directives, the City has implemented a number M/WBE and SBE program initiatives to promote competitive and fair contracting opportunities.

1. Administration of the City of Fort Worth’s Business Diversity Enterprise Programs

During the Study period, Fort Worth’s M/WBE initiatives have been administered by the Office of Business Diversity which reports to the newly created Diversity and Inclusion Department under the City Manager, Deputy City Manager and Assistant City Managers. It is the responsibility of the City Manager to establish, implement and administer the regulations directed by the BDE Ordinance. The City Manager recommends an annual aspirational goal for M/WBE participation. All goals for M/WBE contracting activity are reviewed and approved by the City Council. A Minority and Women Business Enterprise Advisory Committee, which is appointed by the City Council, serves in an advisory role to review Availability and Disparity Study findings, help the City Manager in implementing the program and to inform and make recommendations to the City Manager and Council about program initiatives. The M/WBE Advisory Committee is comprised of 18 representatives from Fort Worth area Chambers of Commerce; partner organizations that promote the utilization and growth of M/WBEs; a regional certification agency; community groups; and internal City of Fort Worth Office of Business Diversity Division staff. Members serve two-year terms and can serve no more than three consecutive two-year terms.

The Business Development Manager administers the overall and day-to-day implementation of the City’s program. This includes developing and maintaining procedures and outreach programs to ensure that M/WBEs are able to compete on contracts. The Business Development Manager’s Office maintains a current listing of certified firms, oversees and enforces contract compliance and monitoring, develops and distributes necessary forms and documents to support the program, reviews contract performance, reports on the progress of departments in achieving goals and issues annual and quarterly reports reflecting progress in attaining the City’s goal.

2. Certification and Program Eligibility Requirements for Business Diversity Enterprise Programs

The City accepts certifications from the North Central Texas Regional Certification Agency, Dallas/Fort Worth Minority Supplier Development Council, the Women’s Business Council – Southwest and the Texas Department of Transportation.

A Minority Business Enterprise (“MBE”) is defined as a “for-profit” independent business concern of which 51 percent is owned and controlled by one or more minority persons or at least 51 percent of the stock is controlled by one or more minorities. A Women Business Enterprise (“WBE”) is defined as a “for-

profit” independent business concern of which at least 51 percent is owned by one or more women or at least 51 percent of the stock is controlled by one or more women. There is also a requirement for both MBE and WBE certifications that management and daily business operations must be controlled by one or more minorities or women who own the firm. Small Business Enterprises (“SBEs”) must meet the Small Business Administration’s size standards and other general requirements as described in the code of Federal Regulations at 13 CFR 121.

Qualifying firms must be located within the market areas applicable to the six county areas where the city spends 80 percent of its tax dollars. Those counties are Tarrant, Dallas, Denton, Johnson, Parker and Wise. Only firms with a principal office in the market area will be counted towards the City’s goals. Qualifying businesses must also have a Significant Business Presence in the Marketplace. This requires that businesses whose Principal Place of Business is outside the Marketplace and whose location within the Marketplace has been verified to be in existence for a minimum of 24 months and from which at least 20% of the business’ full-time and part-time employees are based in the Marketplace.

Some City utility departments require vendor prequalification to perform work. This includes all firms performing water/sewer work for the Water department and lighting and paving firms performing work for the Transportation and Public Works department. Each department is responsible for setting up the prequalification requirements and prequalifying vendors.

3. Business Diversity Enterprise Goal Setting and Program Elements

Subcontracting goals for M/WBEs are set by industry category. For projects \$50,000.01 and greater, overall goals are established in the areas of construction and professional services (excluding Architecture and Engineering) and purchases of goods and services. These category specific goals are based on the availability of M/WBEs in the City’s marketplace as determined by the 2009 Disparity Study. Race and gender-neutral SBE subcontracting goals are set at the City’s discretion on a contract-by-contract basis for Architectural and Engineering contracts.

- A 25 percent goal for MBE participation for construction contracts;
- A 15 percent goal for African-American participation for professional contracts;
- A 25 percent goal for M/WBE participation for goods and non-professional services.
- A 15 percent SBE participation for architectural and engineering services

Annual goals must be based on the total dollars spent annually for construction, construction-related professional services, goods and services contracts; and the availability of MBEs and WBEs to perform these contracts. Goals may be adjusted if there is strong evidence to justify revision, upon review.

Individual subcontracting goals are set by the Office of Business Diversity. As set forth by the BDE Ordinance, any contract goal shall be reasonable, shall be based upon the nature of the subcontracting and materials required to complete the project, and MBE availability.

In addition to using the “standard” subcontracting goals, the City also offers a Joint Venture option on eligible solicitations to encourage M/WBE participation in prime contracting opportunities where it is economically feasible. The City and BDE Ordinance highly encourage joint venture proposals to meet M/WBE and SBE participation goals. Projects designated as “Joint Venture Preferred” receive an additional 20 points for bids that include a least one M/WBE joint venture partner. To participate, both the prime and M/WBE and/or SBE firm must submit an eligibility form for review and approval to the Office of Business Diversity and be of different ethnicities and/or genders to the extent practical. The joint venture M/WBE ownership percentage will be counted towards the M/WBE subcontracting goal. Although proposers are not required to submit a joint venture proposal, they must still meet the required M/WBE or SBE subcontracting goal set for the project and do not receive any additional evaluation points.

Another program enhancement to encourage M/WBEs to take on prime contracting work is the M/WBE Prime Contracting program for construction contracts valued up to \$100,000, and Professional Services and Architectural and Engineering contracts up to \$150,000. The eligibility of City contracts procured using this program depends on the relative availability and degree of underutilization of M/WBEs in the industry category. For these contracts, M/WBE proposers will receive additional points during the consideration process and may not subcontract more than 49 percent to non-M/WBEs. Although the BDE Ordinance only allows SBE goals on Architectural and Engineering contracts, it allows the City at its own discretion, to also give additional points during the consideration process to M/WBE proposers on A&E solicitations. In order to accomplish the policy objective for prime participation, the City will ensure that MBEs and WBEs, who propose as primes and demonstrate the requisite experience and technical proficiency, are given strong and serious consideration during the selection process.

The BDE Ordinance also provides for a Small business Enterprise Subcontracting Program, thereby allowing the City to establish goals on a contract-by-contract basis to encourage participation of M/WBEs and small firms. The BDE Ordinance outlines specific requirements for SBE utilization documentation,

accepted certification standards and audit and sanctions for false representation for contracts solicited under the program. All proposals with an SBE goal must include a detailed plan to address the goal, specify company information, provide a detailed description of work to be performed by each SBE, provide the tier level, the subcontract value or percentage for each SBE participant, give the SBE level of commitment achieved, and information for all non-SBE participants.

M/WBE and SBE utilization plans specifying how all elements of the work will be performed and how the goals met are required for all solicitation types, although the timing of their submission varies based on the method of solicitation.¹⁰⁹ For all proposal types, if M/WBE or SBE participation information is not submitted or a GFE explanation is not provided, the proposer will be deemed to be non-responsive. If the goal cannot be met, the proposer must document that at least two attempts were made using two of the four methods of contact, or that at least one successful contact was made using one of the four contact methods, in order to be deemed responsive to the Good Faith Effort requirement. Regardless of the method, which includes email, fax, regular mail and telephone calls, the submitted documentation must contain the firm name, date and time contacted and the outcome of the contact.

For all program solicitation types, with the exception of some joint venture and Design Build contracts, the BDE Ordinance does not allow proposing certified MBE, SBE or WBE firms to count themselves or their subsidiary-owned companies towards established goals. If allowed by the Office of Business Diversity, the amount equal to the percentage participation in the joint venture can be counted towards the goal. For Design-Build contracts, certified SBE design primes may be able to count their participation towards the SBE goal. The program also requires that all businesses must be certified either at the time of bid or prior to recommendation of award, in order to be counted towards the goal.

A waiver may be requested by the contracting department through the Office of Business Diversity prior to the solicitation. Waivers are requested by submitting in writing or a departmental waiver form, prior to submitting the bid or proposal. There are five reasons that are taken into consideration in granting a waiver: sole source purchases; the infeasibility of using a subcontractor or supplier because of the contract requirements; the immediacy of contract fulfillment required as a result of a public or administrative emergency; the lack of available M/WBE or SBE contractors or suppliers; and the unwarranted risk on the City or undue delay in acquiring the goods and services. Denials can be appealed to the City Manager.

109. There is variation on timing of when the utilization plan must be submitted. 5 days from proposal date for JVs. For other contract types, it's with the proposal.

As governed by the BDE Ordinance, there are no goal requirements for contracts with values of \$50,000 or less. Each department with purchasing authority is encouraged to solicit three bids of which two must be with M/WBEs for solicitations between \$3,000 and \$50,000 to be in compliance with the DBE Ordinance.

Each department must:

- Submit a quarterly M/WBE participation report to the Office of Business Diversity;
- Designate at least one person to serve as a primary liaison to ensure M/WBEs are solicited for purchases;
- Utilize the Office of Business Diversity list of potential vendors;
- Identify and track the use of M/WBEs;
- Evaluate whether there is consistent solicitation of at least two M/WBEs when there is availability and a minimum of three bids are required;
- Evaluate whether M/WBEs are consistently solicited to the fullest extent possible when only one bid is required; and
- Rotate the use of M/WBEs to the full extent practical to spread the overall participation across M/WBEs.

4. Capacity Building, Outreach Activities and Training

To assist in increasing participation of MBEs, the City plans to roll out a Mentor Protégé Program for certified MBEs in construction or construction-related services. The City's program will pair MBE firms with larger prime contractors who have been in business at least seven years, have experience in design, construction, or construction-related professional services as a primary business, have worked or bid on City projects, have documented business processes and procedures, have a local presence in the six county marketplace and are distinct and separate from the prospective protégé. The Protégé must be an MBE-certified firm whose primary business is to perform design, construction or related professional services, be a separate and distinct business entity from the Mentor perform a commercially useful function and have a local presence in the six-county marketplace. The Mentor will assess the needs of the Protégé and partner with their Protégé on projects to provide on-the-job-training. The City plans to apply several criteria that a Protégé must meet to successfully graduate from the program, such as increasing revenues, hiring additional employees, receiving an increase in bonding capacity, receiving bid awards on projects, and graduating from the Beck Construction School in Fort Worth.

The City does not directly offer business development programs. However, in recognition of the need to provide more assistance in developing MBE capacity, the Office of Business Diversity has partnered with other City departments and Tarrant County agencies to offer several important services. The City has entered into a three-year partnership with the Beck School of Construction¹¹⁰ to provide training and education in the construction industry and the bidding process. To be eligible, MBEs must have been in business for at least one year and have gross annual revenues of \$100,000 or greater.

Additionally, the Office of Business Diversity hosts bi-monthly Vendor Informational Forums, quarterly certification workshops and quarterly Requests for Proposals (“RFP”), Requests for Qualifications (“RFQ”), Invitations to Bid (“ITB”), and Best Value Solicitation workshops. The City has a three-year partnership agreement with the Beck Group to host the Beck School of Construction in Fort Worth, TX. In addition, the City has advocacy partners that host events that support business and economic development of M/WBEs, such as the Dallas/Fort Worth Minority Business Development Council, US Pan Asian American Chamber of Commerce, Fort Worth Hispanic Chamber of Commerce, Fort Worth Metropolitan Black Chamber of Commerce, Regional Black Contractors Association, and Regional Hispanic Contractors Association.

The City has also formed informal partnerships with several firms specializing in insurance, bonding, and financing to provide information and to educate M/WBEs. These partner firms also provide credit counseling, investing and business consulting and access to a network of prime and subprime lenders.

Through the Fort Worth Business Assistance Center, the City hosts and participates in a number of outreach events that include networking sessions, luncheons, informational meetings, and pre-bid conferences. The Office of Business Diversity hosts bi-monthly Vendor Informational Forums to M/WBEs in partnership with DFW Airport, Tarrant County, the Fort Worth Independent School District and the City of Arlington to provide information about bid opportunities and how firms can meet bid requirements. The Office hosts quarterly certification training sessions to educate M/WBEs about their certification options and process, in addition to workshops specifically designed to help vendors prepare successful bid responses and proposals.

To increase the success of community outreach, the City also actively participates in Tarrant County and DFW Airport sponsored trade fairs and match making events bringing together primes and M/WBEs. The City partners with local organizations such as the Regional Hispanic Association and Women’s Business Council-Southwest to offer workshops and to provide contracting information to their members.

110. The Beck School of Construction is a partnership between the City and a private firm, the Beck Group.

The City regularly engages the media and communicates opportunities and policy updates via its website. Bi-weekly email alerts are sent out through City News on behalf of the Office of Business Diversity announcing upcoming events and upcoming bids. A video on doing business with the City of Fort Worth is posted to the Office of Business Diversity's website.

Staff training includes attendance at the annual American Contract Compliance Association's, annual National Training Institute¹¹¹ and Airport Minority Advisory Council conferences. Special training is also available by the Texas Unified Certification Program for the U.S. Department of transportation's Disadvantaged Business Enterprise program and the City vendor of its electronic data collection and monitoring system, B2Gnow, Inc. Staff can also attend the Beck and Turner Schools of Construction and training offered by other vendor groups.

To assist potential proposers and bidders, the Purchasing department provides bid information on its website. Open bids and request for proposals can be accessed through the Purchasing website pages using the PeopleSoft Portal, Star Telegram newspaper, City News releases and email if the vendor is registered in the City's vendor database. The BDE Ordinance also requires the individual contracting departments use the City's website, email and professional business and trade associations and other tools to advertise and notify M/WBEs and SBEs of prospective contracting opportunities.

5. Post Award Procedures and Contract Monitoring

In 2017-2018, the City installed the B2Gnow electronic data collection and monitoring system to track payments. The BDE Ordinance sets forth a detailed process for monitoring, resolving and escalating contract non-compliance during the term of the contract, as well as any requested changes in M/WBE or SBE participation. Any unjustified modification or deletion of participation by an M/WBE or SBE shall be deemed as a material breach of contract and may result in debarment.

If the Office of Business Diversity determines that a contractor is out of compliance with M/WBE or SBE contract utilization, the Office will notify the contracting department and the contractor and attempt to resolve non-compliance through reconciliation. If the non-compliance cannot be resolved at this step, then the Office, along with the contracting department, will submit written recommendations to the Legal Department. A finding of non-com-

111. The Senior Contract Compliance Specialists ("CCSs") have obtained their Executive Certified Master Compliance Administrator (ECMCA) Certification from Morgan State University through ACCA. This certification is the highest and most recognized certification in the country and symbolizes that one is an expert in the field.

pliance by the Legal Department will result in sanctions being imposed on the contractor.

B. Experiences with the City of Fort Worth's Business Diversity Enterprise Program

To explore the impacts of race- and gender-neutral contracting policies and procedures and the implementation of the City's M/WBE program, we interviewed 80 individuals about their experiences and solicited their suggestions for changes. The following are summaries of the topics discussed. Quotations are indented and have been edited for readability. They are representative of the views expressed during the group interviews.

1. Outreach to M/WBEs and small firms

While the City does attend vendor fairs hosted by other local area agencies, several owners requested additional targeted meetings only for Fort Worth opportunities that could be tailored to specific industries, such as engineering. Staff with decision-making authority need to participate.

I don't get notices from the City. I have to find out through all the other networks that I work through.

How much effort are you putting into to try to reach out to [M/WBEs for specific projects]?

For all the procurement opportunity fairs that go on, those are really not the people making the decisions. Those are the people that are executing their policy and their programs, how to do business. So, even if you go to those, the chances are slim that you would actually meet the person making the decision.

Several general contractors agreed that the City should host outreach events targeted to specific industries, like construction.

They're more of the professional services type for cities, which is fine, but for the benefit of the actual contractors, they were kind of marginal.

[Targeted sessions are] something the City should do on a quarterly basis.

There was some frustration on the part of City staff that more M/WBEs do not take advantage of outreach events.

We publicize outreach events, especially on the B2G[now] system and through our website and everything. So, [we] just had a big project that nobody showed up. It was highly publicized, and nobody showed up except one vendor.

Vertical construction, yes there is outreach being done because you have the big GCs ... those do have plenty of outreach. Is it a requirement? No, but most of the time they're going to do it because they're trying to meet that goal. Because if not, those are best value [contract]s. We're going to end up ranking them and scoring them on [outreach].... Our GCs happen to be different that are bidding on Fort Worth work are different than the ones that are bidding on Dallas [work].... Now that we have the B2G[now] system, we're doing more outreach out of that system, but we can't hold everybody's hand.

2. Pre-award contract specifications, requirements and processes

Some small firms found it difficult to procure the insurance mandated for specific solicitations.

When it comes to having a first dibs on a contract, everything that we have looks perfect. It looks ideal until we get to the insurance part. And so, I don't know how we work around that.

Often, the large size of City contracts was another impediment to M/WBEs.

Sometimes, they will lump those small little projects and two bigger projects into bigger companies' things, and you're like, "What happened to that \$20,000 one that you had me do all this work on? Where'd it go?"

Long wait times between notice of award and notice to proceed hurt M/WBEs and small firms.

A lot of those small businesses can't sit and wait for four or five months. So, they choose to go somewhere else.... They don't have any capital and most of them were working week to week or month to month anyway and they can't do that. So, it makes it hard to build a business up working for the City.

A few times we've had to go in and redo the paperwork and either replace them or explain to them, you put a narrative together, explain why that company, couple of them have gone out of business. And they just weren't available. We couldn't

find anybody to do it at that price. And the City has been accommodating.

3. Obtaining work through the program

Most M/WBEs reported that the program helps them to obtain work on contracts for which they can be counted towards the goals.

I do commend Gwen and Robert's team. They've been doing this a lot more. They've been a lot more effective and do that for that reason. Because they will do this, and they will get that. And so, I think we need that leadership to go out more.

We've done a lot of work for the City, and proud to be Fort Worth-based.

The City communicates that it takes the program seriously and expects bidders to comply with all requirements.

Nothing is worse than hiring a minority or woman owned firm just for the hell of doing it. I mean, there's nothing worse to a team than that. And it loses the credibility of the program as a whole.

If you promise, if they have a minimum participation, they will track it and they will hold you to it.

Many M/WBEs stated that the City's policy that the program only applies to subcontracting work hurts their ability to become prime vendors and grow their firms.

If you're a minority prime, you do not get credit for being a prime. You only get points in credit for being a sub. It's like, what are you advocating for [with this program]?

You cannot use your percentage.

We don't get any credit.

We're typically prime on projects and so our percentage for the City ... does not count towards their goal.... [Because of] that, my MBE [certification] has never been a benefit.... The whole goal of these programs [should] be to promote firms to better themselves, to improve what they can do to become a bigger firm.

The transition from, basically, sub to general was a lot of frustration, I guess. Because when you're working for a general

contractor, you're at the mercy of their schedules, not your own. With road projects, you tend to see things start, and then they will stop. You've got layers of subcontractors in there. You got dirt contractors, you got a utility contractor, you got the pavement contractor, and then it's usually us there on the very end. Well, scheduling things as a sub, in a perfect world, it's easy to do, but then throw in this contractor being late, franchise utilities being in the way. All of a sudden, the paving contractor can't get there. All these scenarios, and then we're just chasing, we were constantly chasing our tail.

Another barrier is that experience gained through work for a prior employer is often is not counted toward the qualifications for award.

Once you start your own company, you have that clean slate. If you could use kind of the equivalent experience under a previous firm that would help.

4. Payment

The City was generally reported to pay its prime contractors promptly. There were few complaints about payment by prime contractors to subcontractors.

Very positive things about the City of Fort Worth structure now is their payment, their turnaround on pay. They have, for the construction projects, paving civil type projects, they have twice monthly billing. That is very unusual in this industry. Then the other thing too is, once you submit application for payment, well then, generally, in about 7 to 10 days, you got a check.

We've never had a problem 15 years.

We haven't had a problem with them yet. If anything, they would, they're the greatest guys we've ever worked.... As far as working with Fort Worth, we couldn't ask for a better client.

Change orders, however, can add long delays to payments. Small firms' lack of working capital, which reduces their ability to finance delays, imposes burdens on general contractors, too.

We all had change orders that didn't get paid for nine, 10, 12 months that a subcontractor did for us, a minority subcontractor did for us. We went ahead and paid them because they can't afford that. I mean, they'd go out of business.... Most of us are taking care of those guys because we

want him to stay in business so we can use them. So, they're not suffering. Who's suffering is us.

I may not be as generous as these guys. There's a couple of people that we do a lot of business with [we pay early]. But for the majority of them, we [pay when we get paid].

5. Small business assistance initiatives

While the City does make available information on area supportive services and technical assistance, as well as provide information on its website on how to do business with Fort Worth, some M/WBEs welcomed additional assistance for their businesses, such as programs on how to estimate jobs, comply with City paperwork, effective marketing, etc.

As far as the preparation goes making sure that those firms do have the education that they need. Incorporating some type of preparation programs to get them set up.... You have to build those things and it takes time. For the City to incorporate those things would be very beneficial to the contractors.

Another approach is a mentor-protégé initiative.

I kind of see a mentor protégé program, as kind of like an internship. I'm not going to make money off of those projects. But if I know that I'm working on this project and I've got that valuable past performance, that's going to have a dollar value to me later on. So, if I can spend my time and effort working with a company on some projects and I don't have to go out trying to network or trying to get my foot in the door, then that's a value to me. But there again, it's got to have that accountability and those measurables.

One M/WBE had benefited from such a relationship.

I have a company that I've been working with that they've been a really good mentor to me because what they do is, they offer me office space whereas I don't have to pay for office space. And so, it's kind of like I work with them and they show me different things and vice versa because I had background in some areas that they don't really have a lot of knowledge. That to me is like a really good relationships because you get more, you really get something out of it.

While generally supportive of the concept, at least one general contractor urged caution.

More or less tried to mentor somebody. Much more difficult now than it used to be. We just don't have the time that we used to have.

6. Meeting M/WBE contract goals

While not always easy, most prime firms were able to meet M/WBE contract goals on City projects.

I do have minority subs, and I've got some great ones. I'm not going to share them with y'all because I want to keep them for myself. I've got truckers that they're minority truckers. They take care of their business, and they pay their subs, and they do those things. We just, we don't even, that's not even a category that we send out for anymore because I know I've got two of them that I can count on. All the trucking in the job is going to two minority guys, and that's going to count towards our percentage, towards our goal. We've got landscapers we do the same thing with. I've got a couple now. I found another one through the process of the good faith. We found another one, so now I've got two. I wish I had a utility guy, and I wish I had a paving guy.

However, smaller general contractors found compliance with program requirements to be burdensome and often challenging.

Most of the public work, construction work in Fort Worth, the general contractors that are in my organization do a lot of that work. And we're not big companies. There's four people that work in my office. Some of the other ones, maybe they have seven people. Some of them maybe have two people that work in their offices. So, we're not capable of doing outreach. So, what we do is we do what the City requires us to do, which is send out our letters, our emails. I don't know what these big companies that are doing on these major over a hundred million-dollar projects, but the kind of work that we do for the City of Fort Worth, we use MBE firms for trucking, for landscaping, for concrete work.

Some prime vendors report that they use M/WBEs regardless of whether there is a goal on the solicitation.

We're not just using them in Fort Worth that has the program. We're using them in every city that we work with in the metroplex, these same subcontractors. So, it's not a deal where we use them just where there's a goal set.... You're not even

seeing all the participation because some of them haven't taken the time to register because they're getting so much work without registering. They're just not going through that. They don't see the purpose for going through the paperwork. So, I would say on the level that Fort Worth puts out their construction projects, the pool of MBE contractors or WBE contractors that are out there are getting used.... I've seen them using MBE contractors all over the metroplex when it's not required of them in this City.

Bidders raised questions about how the City sets contract goals and whether the goals are reasonable and achievable.

Many times, there is no vendors in there. There's no women, there's no minorities. And so, if those are the services that are being asked for, are we putting realistic goals out there? Because are we setting those reps up for failure? We've got to take a look at that.

Now goals are difficult to meet, so you're probably going to go good faith effort 90 percent of the time because they tend to set the goals too high for what's out there. And I would say one of the reasons you have a hard time finding MB firms to meet goal is because they would also rather work in the commercial or private industry than worked for the city of Fort Worth because of all the issues you have over here working for them. So, I don't think there's firms out there that could do the work. They just rather work for the lowest hanging fruit.

Some construction prime firms lamented the exclusion of White women from the program, which was recommended by the City's prior disparity study.

There are some good women owned businesses ... which makes it more cumbersome on us to achieve that goal, which is kind of defeating the City's purpose to cut their nose off to spite our face.

Several prime contractors reported that the list of certified firms that can be used to meet the goal contains many firms that either do not do the type of work listed in the directory or have even gone out of business.

[The City's] biggest issue with MBE is that their lists have 150 people on there that supposedly do concrete work. But maybe three or four of them actually want to work on a City project and half of them have closed their doors. And so, I've told them for years, you need to clean up that list because everybody just

wants to sign up for everything that they could possibly do, but then they really don't want to do that work. So, get a list that actually has people that want to do City work and in the categories that they're actually gonna bid on. And then that way, maybe the list is instead of being 250 people, maybe we've got 30, 40, 50 people to reach out to and then you might actually be able to develop a relationship with them.

A quick example: I'll put in for this last week and it was for [large] drainage ... [and] one of the names came back was a lawn and sprinkler company.

Some majority firm participants expressed frustration that M/WBEs do not sufficiently market themselves to prime contractors or respond to requests for subcontractor quotations.

If you're not getting used and you're on the mailing list if they have, if you want to do work, respond, make contact, and build relationships, it is all about relationship just like they said. I mean, I barely have time to do everything I want to get done in a day's time. So, I'm not out actively looking for new people to bid my work, but I'll take a number from anybody. You come knock on my door and want to do business. I've never not let anybody come into my office that's knocked on my front door. My secretary is told that anybody that takes the time to come by is welcome to come to my office and sit down and discuss things. And if you're qualified to do work, you're going to do work with me. And I think most of the people in my organization feel that same way.... It's getting that introduction I think that is the problem. And it's got to be both sides.

Unless [the City] make[s] those subs on their list respond to us, we'll never have a relationship.

You sit out a hundred emails and you might get one quote back. So, that's our biggest problem is you never get any quotes.

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You sit out a hundred emails and you might get one quote back. So, that's our biggest problem is you never get any quotes.

It's much more lucrative, easier for all the subcontractors to work on the private side. The economy's good, everything booming. And so, you know, they may be on the list and they keep updated on the list, but they have no desire to do this one.

And so, it's putting an unfair burden on the contractors that are doing the City work with goals that are unreasonable and the reporting process.... Either drop the goal or the City has to make a concerted effort to find interested contractors.

[You] waste all your time and money for something that they know is totally unrealistic to begin with. And we're using everybody, every reputable contractor that we have and we pay ahead to keep on staff and so it's hard to back the MBE program that is obviously not working in our benefit nor theirs.

Another barrier is the City's requirement that some sub trade firms must be prequalified to work as subcontractors on City jobs.

We have a lot of them that they're on the minority list, but there's another list in Fort Worth and you have to be a pre-qualified contractor to perform work there.... I've got a couple that I would be willing to use anytime, but they're not on the [prequalified list].

[It] would help us a lot and would help them get better [for the Diversity and Inclusion Office to know which firms are prequalified].

The quick turnaround time for program compliance documentation was mentioned by some contractors as unreasonable.

Their MBE program was very successful in the past.... But they changed some things, like our time to report is less than two days. That's not enough time. Originally the purpose it was to speed up the award process. Well, it's done nothing.

[The City has] been pretty much accommodating with everything except time. If you don't meet their deadlines, that if it's in the ordinance, they're not accommodating at all. They're not flexible at all. But, anything else, I think I've always had pretty good [results].

C. Conclusion

Overall, the City of Fort Worth's business diversity initiatives were reported to be helpful. Certified firms have received work as a direct result of contract goals, and most stated that without the implementation of contract goals their opportunities would be greatly diminished or non-existent. Prime vendors found meeting the goals challenging, but most were able to include minority and women businesses on their contracts. However, both M/WBEs and prime vendors thought the City

could do more to alleviate obstacles in program requirements and to help M/WBEs do business with the City. Suggested improvements include providing more notification about contract opportunities; reducing contract size and complexity; relaxing provisions that prevent subcontractors from moving into the role of prime vendors; providing additional technical assistance and supportive services; reducing prequalification requirements; reinstating full program eligibility for WBEs; and reducing burdensome compliance provisions.

IV. UTILIZATION, AVAILABILITY AND DISPARITY ANALYSES FOR THE CITY OF FORT WORTH

A. Contract Data Overview

We analyzed contract data for the fiscal years 2013 through 2018 for the City's contracts. To conduct this analysis, we constructed all the fields necessary for our analysis where they were missing in the City's contract records (*e.g.*, industry type; zip codes; NAICS codes of prime contractors and subcontractors; non-certified subcontractor information, including payments, race, gender; etc.). The resulting Final Contract Data File ("FCDF") for analysis contained 315 prime contracts, with a total net paid amount of \$658,947,162. Subcontractors received 1,841 contracts. Prime contractors received \$440,065,101 of the net paid amount; subcontractors received \$218,882,055 of the net paid amount.

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

For purposes of goal setting, the availability estimates are weighted by the City's actual spending patterns, as determined by the NAICS codes it utilized. Weighting availability results is a more accurate picture of which firms are available to participate in the agency's opportunities. For example, high availability in a NAISC code in which minimal dollars are spent would give the impression that there are more M/WBEs that can perform work on agency contracts than are actually ready, willing and able. Conversely, a low availability in a high dollar scope would understate the potential dollars that could be spent with M/WBEs.¹¹²

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

B. The Product and Geographic Markets for the City of Fort Worth’s Contracts

As discussed in Chapter II, a defensible disparity study must determine empirically the industries that comprise the City’s product or industry market. The accepted approach is to analyze those detailed industries, as defined by 6-digit North American Industry Classification System (“NAICS”) codes¹¹³ that make up at least 75 percent of the prime contract and subcontract payments for the study period.¹¹⁴

1. The Unconstrained Product Market for the City’s Contracts

We began our analysis with all of the NAICS codes contained in the City’s FCDF. There are 132 NAICS codes.

Table 4-1 presents the 15 NAICS codes that represented 90 percent of the value of the FCDF. Table D-1 in Appendix D lists all 132 NAICS codes.

Table 4-1: Industry Percentage Distribution of Contracts by Dollars
All Contracts

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
237310	Highway, Street, and Bridge Construction	31.3%	31.3%
237110	Water and Sewer Line and Related Structures Construction	28.2%	59.5%
236220	Commercial and Institutional Building Construction	7.7%	67.3%
541330	Engineering Services	5.1%	72.4%
484220	Specialized Freight (except Used Goods) Trucking, Local	2.8%	75.2%
238210	Electrical Contractors and Other Wiring Installation Contractors	2.8%	78.0%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	1.9%	79.9%
237990	Other Heavy and Civil Engineering Construction	1.8%	81.7%

113. www.census.gov/eos/www/naics.

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

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
238910	Site Preparation Contractors	1.4%	83.2%
238220	Plumbing, Heating, and Air-Conditioning Contractors	1.4%	84.6%
423840	Industrial Supplies Merchant Wholesalers	1.3%	85.9%
324121	Asphalt Paving Mixture and Block Manufacturing	1.3%	87.1%
561730	Landscaping Services	1.2%	88.3%
327320	Ready-Mix Concrete Manufacturing	1.1%	89.4%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	1.1%	90.4%
TOTAL			100.0%^a

a. Agency spending across an additional 117 NAICS codes comprised 9.6 percent of all spending. A chart of all of these NAICS codes is in Appendix D.

Source: CHA analysis of the City data.

2. The City of Fort Worth’s Geographic Market

The courts require that a local government limit the reach of its race- and gender-conscious contracting program to its geographic market area.¹¹⁵ This element of the analysis must be empirically established.¹¹⁶ To determine the relevant geographic market area, we applied the standard of identifying the firm locations that account for at least 75 percent of contract and subcontract dollar payments in the contract data file.¹¹⁷ Location was determined by ZIP code and aggregated into counties as the geographic unit.

The State of Texas contained 97.3 percent of the contract dollars in this market. Three counties – Tarrant, Dallas, and Johnson - capture 92.6 percent of the Texas dollars (and 90.1 percent of the FCDF). Table 4-2 lists how these dollars were distributed across these three counties in Texas. Tarrant, Dallas, and Johnson Counties comprise the geographic market.

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

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

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

Table 4-2: Distribution of Contracts in the City of Fort Worth’s Geographical Market

State/County	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
Tarrant	68.9%	68.9%
Dallas	20.0%	89.0%
Johnson	3.6%	92.6%
TOTAL		100.0%^a

a. The rest of the counties in Texas captured 7.4 percent of the City’s spending in the state.

Source: CHA analysis of the City data.

3. The Utilization of M/WBEs on the City of Fort Worth’s Contracts

Having determined the City’s product and geographic market area (and, therefore, the agency’s *constrained* product market), the next step was to determine the dollar value of the City’s utilization of M/WBEs¹¹⁸ as measured by payments to prime firms and subcontractors and disaggregated by race and gender. The City did not collect data for all subcontractors, as well as other records critical for the study. We therefore had to obtain missing data from prime vendors, a lengthy process, and reconstruct other contract records, including researching the race and gender ownership of subcontractors and assigning NAICS codes to those firms.

Limiting the unconstrained product market to the boundaries of those three counties reduced the number of NAICS codes further analyzed in this study to 114.

Tables 4-3 through 4-5 present data on the utilization of total contract dollars in the constrained product market. (Note the contract dollar shares in Table 4-3 are equivalent to the weight of spending in each NAICS code. These weights were used to transform data from unweighted availability to weighted availability, as discussed below.)

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

Table 4-3: NAICS Code Distribution of Contract Dollars

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
237310	Highway, Street, and Bridge Construction	\$191,813,920.00	32.31998%
237110	Water and Sewer Line and Related Structures Construction	\$171,981,536.00	28.97829%
236220	Commercial and Institutional Building Construction	\$50,255,388.00	8.46786%
541330	Engineering Services	\$30,722,446.00	5.17663%
238210	Electrical Contractors and Other Wiring Installation Contractors	\$17,660,142.00	2.97567%
484220	Specialized Freight (except Used Goods) Trucking, Local	\$10,439,083.00	1.75895%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	\$10,409,025.00	1.75388%
237990	Other Heavy and Civil Engineering Construction	\$8,975,282.00	1.51230%
238910	Site Preparation Contractors	\$8,511,074.00	1.43409%
324121	Asphalt Paving Mixture and Block Manufacturing	\$8,249,911.00	1.39008%
327320	Ready-Mix Concrete Manufacturing	\$7,178,609.00	1.20957%
238220	Plumbing, Heating, and Air-Conditioning Contractors	\$7,115,119.00	1.19887%
423840	Industrial Supplies Merchant Wholesalers	\$6,861,563.50	1.15615%
561730	Landscaping Services	\$6,840,401.50	1.15258%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	\$5,794,536.50	0.97636%
238110	Poured Concrete Foundation and Structure Contractors	\$4,758,905.50	0.80186%
238120	Structural Steel and Precast Concrete Contractors	\$4,434,271.00	0.74716%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	\$4,121,663.75	0.69449%
238990	All Other Specialty Trade Contractors	\$3,860,757.25	0.65052%
484110	General Freight Trucking, Local	\$3,001,637.75	0.50577%

City of Fort Worth Disparity Study 2020

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
561720	Janitorial Services	\$2,269,689.75	0.38243%
238140	Masonry Contractors	\$2,037,837.88	0.34337%
238310	Drywall and Insulation Contractors	\$1,785,638.00	0.30087%
238190	Other Foundation, Structure, and Building Exterior Contractors	\$1,688,673.00	0.28454%
238160	Roofing Contractors	\$1,669,256.75	0.28126%
541370	Surveying and Mapping (except Geophysical) Services	\$1,627,957.75	0.27431%
424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	\$1,550,149.00	0.26119%
332312	Fabricated Structural Metal Manufacturing	\$1,493,338.00	0.25162%
238390	Other Building Finishing Contractors	\$1,366,806.75	0.23030%
561990	All Other Support Services	\$1,233,056.75	0.20777%
444190	Other Building Material Dealers	\$927,882.75	0.15635%
541380	Testing Laboratories	\$903,851.81	0.15230%
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	\$726,447.31	0.12240%
238350	Finish Carpentry Contractors	\$604,764.69	0.10190%
237120	Oil and Gas Pipeline and Related Structures Construction	\$596,773.44	0.10055%
562910	Remediation Services	\$585,738.62	0.09869%
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	\$569,992.25	0.09604%
561440	Collection Agencies	\$553,474.12	0.09326%
238330	Flooring Contractors	\$521,310.00	0.08784%
238320	Painting and Wall Covering Contractors	\$511,376.00	0.08617%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	\$463,835.16	0.07815%
327332	Concrete Pipe Manufacturing	\$463,053.75	0.07802%
423390	Other Construction Material Merchant Wholesalers	\$457,513.78	0.07709%
221330	Steam and Air-Conditioning Supply	\$352,863.88	0.05946%

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
331511	Iron Foundries	\$323,062.47	0.05443%
524126	Direct Property and Casualty Insurance Carriers	\$306,515.00	0.05165%
238150	Glass and Glazing Contractors	\$293,938.00	0.04953%
339950	Sign Manufacturing	\$262,990.56	0.04431%
238290	Other Building Equipment Contractors	\$256,878.86	0.04328%
212312	Crushed and Broken Limestone Mining and Quarrying	\$248,742.83	0.04191%
562111	Solid Waste Collection	\$245,519.00	0.04137%
424710	Petroleum Bulk Stations and Terminals	\$223,817.27	0.03771%
541191	Title Abstract and Settlement Offices	\$216,451.41	0.03647%
238340	Tile and Terrazzo Contractors	\$212,599.00	0.03582%
332618	Other Fabricated Wire Product Manufacturing	\$193,400.00	0.03259%
561621	Security Systems Services (except Locksmiths)	\$178,755.00	0.03012%
331110	Iron and Steel Mills and Ferroalloy Manufacturing	\$175,280.14	0.02953%
314999	All Other Miscellaneous Textile Product Mills	\$175,243.00	0.02953%
326122	Plastics Pipe and Pipe Fitting Manufacturing	\$163,046.22	0.02747%
541310	Architectural Services	\$156,291.59	0.02633%
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	\$145,409.14	0.02450%
333120	Construction Machinery Manufacturing	\$141,031.80	0.02376%
541990	All Other Professional, Scientific, and Technical Services	\$126,971.90	0.02139%
454310	Fuel Dealers	\$126,697.43	0.02135%
236210	Industrial Building Construction	\$123,368.16	0.02079%
424590	Other Farm Product Raw Material Merchant Wholesalers	\$120,693.38	0.02034%
327410	Lime Manufacturing	\$93,299.95	0.01572%
444120	Paint and Wallpaper Stores	\$87,256.17	0.01470%
561311	Employment Placement Agencies	\$80,000.00	0.01348%
541820	Public Relations Agencies	\$76,486.95	0.01289%

City of Fort Worth Disparity Study 2020

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	\$75,020.71	0.01264%
423440	Other Commercial Equipment Merchant Wholesalers	\$64,497.91	0.01087%
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	\$57,297.53	0.00965%
212321	Construction Sand and Gravel Mining	\$54,333.36	0.00915%
213112	Support Activities for Oil and Gas Operations	\$46,224.00	0.00779%
541320	Landscape Architectural Services	\$41,000.00	0.00691%
541720	Research and Development in the Social Sciences and Humanities	\$40,961.62	0.00690%
321114	Wood Preservation	\$38,171.88	0.00643%
541620	Environmental Consulting Services	\$38,040.00	0.00641%
324110	Petroleum Refineries	\$29,786.12	0.00502%
424690	Other Chemical and Allied Products Merchant Wholesalers	\$27,584.00	0.00465%
562991	Septic Tank and Related Services	\$23,068.03	0.00389%
541420	Industrial Design Services	\$22,000.00	0.00371%
484121	General Freight Trucking, Long-Distance, Truckload	\$21,393.49	0.00360%
488999	All Other Support Activities for Transportation	\$20,266.70	0.00341%
337215	Showcase, Partition, Shelving, and Locker Manufacturing	\$15,915.00	0.00268%
221320	Sewage Treatment Facilities	\$15,000.00	0.00253%
517311	Wired Telecommunications Carriers	\$12,570.30	0.00212%
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	\$12,000.00	0.00202%
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	\$10,543.08	0.00178%
561790	Other Services to Buildings and Dwellings	\$9,350.00	0.00158%
541350	Building Inspection Services	\$9,185.00	0.00155%
316998	All Other Leather Good and Allied Product Manufacturing	\$8,870.00	0.00149%

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
331221	Rolled Steel Shape Manufacturing	\$8,307.57	0.00140%
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	\$7,956.73	0.00134%
541211	Offices of Certified Public Accountants	\$7,812.50	0.00132%
541611	Administrative Management and General Management Consulting Services	\$7,500.00	0.00126%
327110	Pottery, Ceramics, and Plumbing Fixture Manufacturing	\$6,982.00	0.00118%
519110	News Syndicates	\$6,499.98	0.00110%
541613	Marketing Consulting Services	\$6,100.00	0.00103%
531390	Other Activities Related to Real Estate	\$5,390.54	0.00091%
323111	Commercial Printing (except Screen and Books)	\$4,892.87	0.00082%
424950	Paint, Varnish, and Supplies Merchant Wholesalers	\$4,513.25	0.00076%
561320	Temporary Help Services	\$4,424.40	0.00075%
488410	Motor Vehicle Towing	\$4,350.00	0.00073%
561910	Packaging and Labeling Services	\$3,507.03	0.00059%
332996	Fabricated Pipe and Pipe Fitting Manufacturing	\$2,905.00	0.00049%
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	\$2,545.58	0.00043%
424120	Stationery and Office Supplies Merchant Wholesalers	\$2,240.00	0.00038%
561499	All Other Business Support Services	\$1,335.00	0.00022%
541340	Drafting Services	\$1,127.50	0.00019%
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	\$1,083.71	0.00018%
531320	Offices of Real Estate Appraisers	\$1,066.00	0.00018%
423710	Hardware Merchant Wholesalers	\$114.31	0.00002%
Total		\$593,484,030.87	100.0%

Source: CHA analysis of the City data.

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

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
212312	\$0	\$0	\$0	\$0	\$0	\$0	\$248,743	\$248,743
212321	\$0	\$54,333	\$0	\$0	\$0	\$54,333	\$0	\$54,333
213112	\$0	\$46,224	\$0	\$0	\$0	\$46,224	\$0	\$46,224
221320	\$0	\$0	\$0	\$0	\$15,000	\$15,000	\$0	\$15,000
221330	\$0	\$352,864	\$0	\$0	\$0	\$352,864	\$0	\$352,864
236210	\$0	\$17,820	\$105,548	\$0	\$0	\$123,368	\$0	\$123,368
236220	\$326,446	\$989,139	\$0	\$0	\$7,071,932	\$8,387,517	\$41,867,870	\$50,255,386
237110	\$0	\$6,230,264	\$1,248,532	\$0	\$3,282,097	\$10,760,892	\$161,220,636	\$171,981,529
237120	\$0	\$446,144	\$0	\$0	\$1,260	\$447,404	\$149,369	\$596,773
237310	\$4,292,711	\$8,120,126	\$9,696,045	\$0	\$1,663,615	\$23,772,496	\$168,041,429	\$191,813,925
237990	\$75,600	\$48,600	\$461,172	\$0	\$0	\$585,372	\$8,389,909	\$8,975,282
238110	\$1,318,820	\$2,265,191	\$493,992	\$0	\$313,990	\$4,391,992	\$366,914	\$4,758,906
238120	\$45,491	\$439,380	\$0	\$261,923	\$425,644	\$1,172,438	\$3,261,833	\$4,434,271
238140	\$1,139,768	\$217,688	\$0	\$0	\$0	\$1,357,456	\$680,382	\$2,037,838
238150	\$0	\$0	\$0	\$0	\$293,938	\$293,938	\$0	\$293,938
238160	\$0	\$950,003	\$0	\$0	\$0	\$950,003	\$719,254	\$1,669,257
238190	\$0	\$1,653,966	\$0	\$0	\$5,532	\$1,659,498	\$29,176	\$1,688,673
238210	\$0	\$1,616,174	\$0	\$0	\$1,442,094	\$3,058,268	\$14,601,874	\$17,660,142
238220	\$605,421	\$1,381,813	\$0	\$0	\$249,770	\$2,237,004	\$4,878,116	\$7,115,119
238290	\$0	\$0	\$0	\$0	\$0	\$0	\$256,879	\$256,879
238310	\$0	\$4,539	\$0	\$0	\$177,411	\$181,950	\$1,603,688	\$1,785,638

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
238320	\$20,100	\$163,496	\$0	\$0	\$118,504	\$302,100	\$209,276	\$511,376
238330	\$0	\$39,434	\$0	\$0	\$75,028	\$114,462	\$406,848	\$521,310
238340	\$0	\$990	\$0	\$0	\$0	\$990	\$211,609	\$212,599
238350	\$34,155	\$234,583	\$0	\$0	\$43,175	\$311,913	\$292,852	\$604,765
238390	\$0	\$0	\$0	\$0	\$1,332,516	\$1,332,516	\$34,291	\$1,366,807
238910	\$439,132	\$178,470	\$50,085	\$0	\$4,726,598	\$5,394,285	\$3,116,790	\$8,511,074
238990	\$24,581	\$1,219,351	\$18,905	\$0	\$117,749	\$1,380,587	\$2,480,170	\$3,860,757
314999	\$0	\$0	\$0	\$0	\$0	\$0	\$175,243	\$175,243
316998	\$0	\$0	\$0	\$0	\$8,870	\$8,870	\$0	\$8,870
321114	\$0	\$0	\$0	\$0	\$38,172	\$38,172	\$0	\$38,172
323111	\$0	\$4,893	\$0	\$0	\$0	\$4,893	\$0	\$4,893
324110	\$0	\$0	\$0	\$0	\$0	\$0	\$29,786	\$29,786
324121	\$0	\$0	\$0	\$0	\$0	\$0	\$8,249,911	\$8,249,911
326122	\$0	\$0	\$0	\$0	\$0	\$0	\$163,046	\$163,046
327110	\$0	\$0	\$0	\$0	\$0	\$0	\$6,982	\$6,982
327320	\$0	\$0	\$0	\$0	\$5,795,626	\$5,795,626	\$1,382,983	\$7,178,609
327332	\$0	\$145,489	\$0	\$0	\$0	\$145,489	\$317,565	\$463,054
327410	\$0	\$0	\$0	\$0	\$0	\$0	\$93,300	\$93,300
331110	\$0	\$0	\$0	\$0	\$62,367	\$62,367	\$112,913	\$175,280
331210	\$0	\$141,891	\$0	\$0	\$0	\$141,891	\$3,518	\$145,409
331221	\$0	\$0	\$0	\$0	\$0	\$0	\$8,308	\$8,308
331511	\$0	\$0	\$0	\$0	\$1,930	\$1,930	\$321,133	\$323,062
332312	\$0	\$0	\$0	\$0	\$0	\$0	\$1,493,338	\$1,493,338

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
332618	\$0	\$0	\$0	\$0	\$193,400	\$193,400	\$0	\$193,400
332996	\$0	\$0	\$0	\$0	\$0	\$0	\$2,905	\$2,905
332999	\$0	\$633	\$0	\$0	\$213,645	\$214,278	\$249,557	\$463,835
333120	\$0	\$0	\$0	\$0	\$0	\$0	\$141,032	\$141,032
337215	\$0	\$15,915	\$0	\$0	\$0	\$15,915	\$0	\$15,915
339950	\$0	\$0	\$0	\$0	\$0	\$0	\$262,991	\$262,991
423320	\$0	\$0	\$7,646	\$0	\$4,056,361	\$4,064,007	\$1,730,529	\$5,794,536
423390	\$0	\$12,703	\$0	\$0	\$0	\$12,703	\$444,811	\$457,514
423440	\$0	\$0	\$0	\$0	\$64,498	\$64,498	\$0	\$64,498
423510	\$0	\$404,993	\$0	\$0	\$30,210	\$435,203	\$9,973,823	\$10,409,025
423610	\$0	\$1,303,533	\$0	\$0	\$1,659,358	\$2,962,891	\$1,158,772	\$4,121,664
423710	\$0	\$0	\$0	\$0	\$0	\$0	\$114	\$114
423720	\$0	\$198,119	\$0	\$0	\$0	\$198,119	\$371,873	\$569,992
423740	\$0	\$0	\$0	\$0	\$0	\$0	\$57,298	\$57,298
423820	\$0	\$0	\$0	\$0	\$0	\$0	\$7,957	\$7,957
423840	\$265,750	\$3,974,838	\$0	\$0	\$464,568	\$4,705,155	\$2,156,408	\$6,861,563
424120	\$0	\$0	\$0	\$0	\$0	\$0	\$2,240	\$2,240
424590	\$0	\$120,693	\$0	\$0	\$0	\$120,693	\$0	\$120,693
424690	\$0	\$0	\$0	\$0	\$27,584	\$27,584	\$0	\$27,584
424710	\$0	\$0	\$0	\$0	\$149,850	\$149,850	\$73,967	\$223,817
424720	\$0	\$0	\$0	\$0	\$1,285,479	\$1,285,479	\$264,670	\$1,550,149
424950	\$0	\$0	\$0	\$0	\$0	\$0	\$4,513	\$4,513
444120	\$0	\$0	\$0	\$87,256	\$0	\$87,256	\$0	\$87,256

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
444190	\$0	\$499,683	\$0	\$0	\$0	\$499,683	\$428,200	\$927,883
453998	\$0	\$0	\$75,021	\$0	\$0	\$75,021	\$0	\$75,021
454310	\$0	\$0	\$0	\$0	\$126,697	\$126,697	\$0	\$126,697
484110	\$440,951	\$2,533,149	\$0	\$0	\$0	\$2,974,099	\$27,538	\$3,001,638
484121	\$0	\$0	\$0	\$0	\$0	\$0	\$21,393	\$21,393
484220	\$2,899,018	\$6,850,990	\$0	\$0	\$353,799	\$10,103,807	\$335,277	\$10,439,083
484230	\$0	\$10,543	\$0	\$0	\$0	\$10,543	\$0	\$10,543
488410	\$0	\$0	\$0	\$0	\$0	\$0	\$4,350	\$4,350
488999	\$0	\$0	\$0	\$0	\$20,267	\$20,267	\$0	\$20,267
517311	\$0	\$622	\$0	\$0	\$11,948	\$12,570	\$0	\$12,570
519110	\$0	\$0	\$0	\$0	\$6,500	\$6,500	\$0	\$6,500
524126	\$0	\$0	\$0	\$0	\$0	\$0	\$306,515	\$306,515
531320	\$1,066	\$0	\$0	\$0	\$0	\$1,066	\$0	\$1,066
531390	\$0	\$0	\$0	\$0	\$5,391	\$5,391	\$0	\$5,391
532412	\$0	\$0	\$0	\$0	\$0	\$0	\$726,447	\$726,447
532490	\$0	\$0	\$0	\$0	\$0	\$0	\$2,546	\$2,546
541191	\$0	\$75,871	\$0	\$0	\$140,581	\$216,451	\$0	\$216,451
541211	\$0	\$0	\$0	\$0	\$7,812	\$7,812	\$0	\$7,812
541310	\$0	\$0	\$0	\$0	\$84,383	\$84,383	\$71,908	\$156,292
541320	\$7,500	\$0	\$0	\$0	\$0	\$7,500	\$33,500	\$41,000
541330	\$192,390	\$8,605,379	\$1,635,460	\$1,472,900	\$2,452,700	\$14,358,828	\$16,363,619	\$30,722,447
541340	\$0	\$0	\$0	\$0	\$1,128	\$1,128	\$0	\$1,128
541350	\$0	\$0	\$0	\$0	\$9,185	\$9,185	\$0	\$9,185

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
541370	\$0	\$732,813	\$0	\$309,574	\$457,465	\$1,499,852	\$128,106	\$1,627,958
541380	\$309,106	\$69,799	\$0	\$0	\$293,724	\$672,629	\$231,223	\$903,852
541420	\$0	\$0	\$0	\$0	\$0	\$0	\$22,000	\$22,000
541611	\$0	\$0	\$0	\$0	\$7,500	\$7,500	\$0	\$7,500
541613	\$6,100	\$0	\$0	\$0	\$0	\$6,100	\$0	\$6,100
541620	\$38,040	\$0	\$0	\$0	\$0	\$38,040	\$0	\$38,040
541715	\$0	\$0	\$0	\$0	\$12,000	\$12,000	\$0	\$12,000
541720	\$0	\$0	\$0	\$0	\$40,962	\$40,962	\$0	\$40,962
541820	\$76,487	\$0	\$0	\$0	\$0	\$76,487	\$0	\$76,487
541990	\$10,165	\$35,800	\$0	\$0	\$81,007	\$126,972	\$0	\$126,972
561311	\$0	\$0	\$0	\$0	\$80,000	\$80,000	\$0	\$80,000
561320	\$0	\$4,424	\$0	\$0	\$0	\$4,424	\$0	\$4,424
561440	\$0	\$0	\$0	\$0	\$0	\$0	\$553,474	\$553,474
561499	\$0	\$0	\$0	\$0	\$1,335	\$1,335	\$0	\$1,335
561621	\$0	\$178,755	\$0	\$0	\$0	\$178,755	\$0	\$178,755
561720	\$1,245,534	\$0	\$811,687	\$0	\$212,469	\$2,269,690	\$0	\$2,269,690
561730	\$0	\$6,067,853	\$0	\$0	\$130,876	\$6,198,729	\$641,672	\$6,840,401
561790	\$9,350	\$0	\$0	\$0	\$0	\$9,350	\$0	\$9,350
561910	\$0	\$0	\$0	\$3,507	\$0	\$3,507	\$0	\$3,507
561990	\$5,732	\$418,610	\$0	\$0	\$561,037	\$985,378	\$247,679	\$1,233,057
562111	\$237,726	\$0	\$0	\$0	\$7,793	\$245,519	\$0	\$245,519
562910	\$0	\$0	\$0	\$0	\$585,739	\$585,739	\$0	\$585,739

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
562991	\$0	\$10,154	\$0	\$0	\$3,139	\$13,293	\$9,775	\$23,068
811310	\$0	\$0	\$0	\$0	\$0	\$0	\$1,084	\$1,084
Total	\$14,067,140	\$59,088,737	\$14,604,093	\$2,135,160	\$41,103,208	\$130,998,331	\$462,485,700	\$593,484,029

Source: CHA analysis of the City data.

**Table 4-5: Distribution of Contract Dollars by Race and Gender
(share of total dollars)**

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
212312	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
212321	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
213112	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
221320	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
221330	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
236210	0.0%	14.4%	85.6%	0.0%	0.0%	100.0%	0.0%	100.0%
236220	0.7%	2.0%	0.0%	0.0%	14.1%	16.7%	83.3%	100.0%
237110	0.0%	3.6%	0.7%	0.0%	1.9%	6.3%	93.7%	100.0%
237120	0.0%	74.8%	0.0%	0.0%	0.2%	75.0%	25.0%	100.0%
237310	2.2%	4.2%	5.1%	0.0%	0.9%	12.4%	87.6%	100.0%
237990	0.8%	0.5%	5.1%	0.0%	0.0%	6.5%	93.5%	100.0%
238110	27.7%	47.6%	10.4%	0.0%	6.6%	92.3%	7.7%	100.0%
238120	1.0%	9.9%	0.0%	5.9%	9.6%	26.4%	73.6%	100.0%
238140	55.9%	10.7%	0.0%	0.0%	0.0%	66.6%	33.4%	100.0%
238150	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%

City of Fort Worth Disparity Study 2020

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
238160	0.0%	56.9%	0.0%	0.0%	0.0%	56.9%	43.1%	100.0%
238190	0.0%	97.9%	0.0%	0.0%	0.3%	98.3%	1.7%	100.0%
238210	0.0%	9.2%	0.0%	0.0%	8.2%	17.3%	82.7%	100.0%
238220	8.5%	19.4%	0.0%	0.0%	3.5%	31.4%	68.6%	100.0%
238290	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
238310	0.0%	0.3%	0.0%	0.0%	9.9%	10.2%	89.8%	100.0%
238320	3.9%	32.0%	0.0%	0.0%	23.2%	59.1%	40.9%	100.0%
238330	0.0%	7.6%	0.0%	0.0%	14.4%	22.0%	78.0%	100.0%
238340	0.0%	0.5%	0.0%	0.0%	0.0%	0.5%	99.5%	100.0%
238350	5.7%	38.8%	0.0%	0.0%	7.1%	51.6%	48.4%	100.0%
238390	0.0%	0.0%	0.0%	0.0%	97.5%	97.5%	2.5%	100.0%
238910	5.2%	2.1%	0.6%	0.0%	55.5%	63.4%	36.6%	100.0%
238990	0.6%	31.6%	0.5%	0.0%	3.1%	35.8%	64.2%	100.0%
314999	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
316998	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
321114	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
323111	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
324110	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
324121	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
326122	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
327110	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
327320	0.0%	0.0%	0.0%	0.0%	80.7%	80.7%	19.3%	100.0%
327332	0.0%	31.4%	0.0%	0.0%	0.0%	31.4%	68.6%	100.0%
327410	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
331110	0.0%	0.0%	0.0%	0.0%	35.6%	35.6%	64.4%	100.0%
331210	0.0%	97.6%	0.0%	0.0%	0.0%	97.6%	2.4%	100.0%
331221	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
331511	0.0%	0.0%	0.0%	0.0%	0.6%	0.6%	99.4%	100.0%
332312	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
332618	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
332996	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
332999	0.0%	0.1%	0.0%	0.0%	46.1%	46.2%	53.8%	100.0%
333120	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
337215	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
339950	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423320	0.0%	0.0%	0.1%	0.0%	70.0%	70.1%	29.9%	100.0%
423390	0.0%	2.8%	0.0%	0.0%	0.0%	2.8%	97.2%	100.0%
423440	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
423510	0.0%	3.9%	0.0%	0.0%	0.3%	4.2%	95.8%	100.0%
423610	0.0%	31.6%	0.0%	0.0%	40.3%	71.9%	28.1%	100.0%
423710	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423720	0.0%	34.8%	0.0%	0.0%	0.0%	34.8%	65.2%	100.0%
423740	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423820	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
423840	3.9%	57.9%	0.0%	0.0%	6.8%	68.6%	31.4%	100.0%
424120	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
424590	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
424690	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
424710	0.0%	0.0%	0.0%	0.0%	67.0%	67.0%	33.1%	100.0%
424720	0.0%	0.0%	0.0%	0.0%	82.9%	82.9%	17.1%	100.0%
424950	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
444120	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
444190	0.0%	53.9%	0.0%	0.0%	0.0%	53.9%	46.2%	100.0%
453998	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	0.0%	100.0%
454310	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
484110	14.7%	84.4%	0.0%	0.0%	0.0%	99.1%	0.9%	100.0%
484121	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
484220	27.8%	65.6%	0.0%	0.0%	3.4%	96.8%	3.2%	100.0%
484230	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
488410	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%

City of Fort Worth Disparity Study 2020

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
488999	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
517311	0.0%	5.0%	0.0%	0.0%	95.1%	100.0%	0.0%	100.0%
519110	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
524126	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
531320	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
531390	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
532412	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
532490	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541191	0.0%	35.1%	0.0%	0.0%	65.0%	100.0%	0.0%	100.0%
541211	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541310	0.0%	0.0%	0.0%	0.0%	54.0%	54.0%	46.0%	100.0%
541320	18.3%	0.0%	0.0%	0.0%	0.0%	18.3%	81.7%	100.0%
541330	0.6%	28.0%	5.3%	4.8%	8.0%	46.7%	53.3%	100.0%
541340	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541350	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541370	0.0%	45.0%	0.0%	19.0%	28.1%	92.1%	7.9%	100.0%
541380	34.2%	7.7%	0.0%	0.0%	32.5%	74.4%	25.6%	100.0%
541420	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
541611	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541613	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
541620	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
541715	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541720	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
541820	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
541990	8.0%	28.2%	0.0%	0.0%	63.8%	100.0%	0.0%	100.0%
561311	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
561320	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
561440	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
561499	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
561621	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
561720	54.9%	0.0%	35.8%	0.0%	9.4%	100.0%	0.0%	100.0%
561730	0.0%	88.7%	0.0%	0.0%	1.9%	90.6%	9.4%	100.0%
561790	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
561910	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
561990	0.5%	34.0%	0.0%	0.0%	45.5%	79.9%	20.1%	100.0%
562111	96.8%	0.0%	0.0%	0.0%	3.2%	100.0%	0.0%	100.0%
562910	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%
562991	0.0%	44.0%	0.0%	0.0%	13.6%	57.6%	42.4%	100.0%
811310	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Total	2.4%	10.0%	2.5%	0.4%	6.9%	22.1%	77.9%	100.0%

Source: CHA analysis of the City data.

4. The Availability of M/WBEs in the City of Fort Worth’s Constrained Product Market

Estimates of the availability of M/WBEs in the City’s market area are a critical component of the analysis of possible barriers to equal opportunities to participate in the agency’s contracting activities. These availability estimates are compared to the utilization percentage of dollars received by M/WBEs to examine whether minority- and women-owned firms are at parity. Availability estimates are also crucial for the City to set narrowly tailored annual and contract goals on contracts covered by its M/WBE program.

We generally applied the “custom census” approach with refinements to estimating availability. The courts and the National Model Disparity Study Guidelines¹¹⁹ have recognized this methodology as superior to the other methods for at least four reasons:

- First, it provides an internally consistent and rigorous “apples to apples” comparison between firms in the availability numerator and those in the denominator. Other approaches often have different definitions for the firms in the numerator (e.g., certified M/WBEs or firms that respond to a survey) and the denominator (e.g., registered vendors or the Census Bureau’s County Business Patterns data).

119. National Disparity Study Guidelines, pp.57-58.

- Second, by examining a comprehensive group of firms, it “casts a broader net” beyond those known to the agency. As recognized by the courts, this comports with the remedial nature of contracting affirmative action programs by seeking to bring in businesses that have historically been excluded. Our methodology is less likely to be tainted by the effects of past and present discrimination than other methods, such as bidders’ lists, because it seeks out firms in the City’s market areas that have not been able to access the agency’s opportunities.
- Third, this approach is less impacted by variables affected by discrimination. Factors such as firm age, size, qualifications, and experience are all elements of business success where discrimination would be manifested. Most courts have held that the results of discrimination – which impact factors affecting capacity – should not be the benchmark for a program designed to ameliorate the effects of discrimination. They have acknowledged that minority and women firms may be smaller, newer, and otherwise less competitive than non-M/WBEs because of the very discrimination sought to be remedied by race-conscious contracting programs. Racial and gender differences in these “capacity” factors are the outcomes of discrimination and it is therefore inappropriate as a matter of economics and statistics to use them as “control” variables in a disparity study.¹²⁰
- Fourth, it has been upheld by every court that has reviewed it, including most recently in the successful defense of the Illinois State Toll Highway’s DBE program, for which we served as testifying experts.¹²¹

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

- The Final Contract Data File;
- The Master M/WBE Directory compiled by CHA; and
- The Dun & Bradstreet/Hoovers Database downloaded from the company’s website.

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

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

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

We next developed a custom database from Hoovers, a Dun & Bradstreet company. Hoovers maintains a comprehensive, extensive and regularly updated listing of all firms conducting business. The database includes a vast amount of information on each firm, including location and detailed industry codes, and is the broadest publicly available data source for firm information. We purchased the information from Hoovers for the firms in the NAICS codes located in the City’s market area in order to form our custom Dun & Bradstreet/Hoovers Database. In the initial download, the data from Hoovers simply identifies a firm as being minority-owned.¹²² However, the company does keep detailed information on ethnicity (*i.e.*, is the minority firm owner Black, Hispanic, Asian, or Native American). We obtained this additional information from Hoovers by special request.¹²³

We merged these three databases to form an accurate estimate of firm availability to the agency. Tables 4-6 through 4-19 present data on:

- The unweighted availability by race and gender, and by NAICS codes for contracts in the City’s constrained product markets;
- The weights used to adjust the unweighted numbers¹²⁴;
- The final estimates of the weighted averages of the individual 6-digit level availability estimates in the City’s market areas; and
- The disparity ratios by demographic group.

The weighted availability estimates can be used by the City to set its M/WBE goals.

Table 4-6: Unweighted Availability for the City of Fort Worth’s Contracts

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
212312	0.0%	0.0%	0.0%	0.0%	5.0%	5.0%	95.0%	100.0%
212321	3.6%	1.8%	0.0%	0.0%	1.8%	7.3%	92.7%	100.0%
213112	0.1%	0.4%	0.0%	0.0%	1.2%	1.7%	98.3%	100.0%
221320	0.0%	0.0%	0.0%	0.0%	10.0%	10.0%	90.0%	100.0%
221330	10.0%	20.0%	0.0%	0.0%	0.0%	30.0%	70.0%	100.0%
236210	19.0%	19.0%	5.1%	2.9%	14.6%	60.6%	39.4%	100.0%

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

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

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

City of Fort Worth Disparity Study 2020

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
236220	11.8%	9.0%	3.1%	2.1%	9.2%	35.4%	64.6%	100.0%
237110	0.0%	5.2%	0.7%	0.0%	5.2%	11.8%	88.2%	100.0%
237120	3.0%	3.0%	0.0%	0.0%	1.0%	7.1%	92.9%	100.0%
237310	13.7%	15.2%	2.3%	1.0%	8.0%	40.4%	59.6%	100.0%
237990	3.0%	2.0%	2.0%	0.0%	3.0%	10.0%	90.0%	100.0%
238110	0.7%	3.3%	0.5%	0.4%	3.9%	9.1%	90.9%	100.0%
238120	9.9%	23.7%	0.8%	3.8%	13.0%	51.9%	48.1%	100.0%
238140	1.8%	3.4%	0.0%	0.0%	3.1%	8.3%	91.7%	100.0%
238150	0.0%	1.8%	3.5%	0.0%	16.7%	21.9%	78.1%	100.0%
238160	0.9%	1.4%	0.3%	0.3%	2.5%	5.7%	94.3%	100.0%
238190	1.7%	6.7%	0.0%	0.0%	5.0%	13.3%	86.7%	100.0%
238210	3.1%	4.4%	1.0%	0.4%	6.4%	15.7%	84.3%	100.0%
238220	2.6%	2.4%	0.3%	0.1%	3.6%	9.1%	90.9%	100.0%
238290	8.1%	12.8%	4.7%	2.3%	14.0%	41.9%	58.1%	100.0%
238310	4.1%	8.3%	0.2%	0.7%	4.8%	18.3%	81.7%	100.0%
238320	0.5%	1.9%	0.3%	0.1%	2.8%	5.8%	94.2%	100.0%
238330	1.4%	1.9%	0.0%	0.0%	6.5%	10.2%	89.8%	100.0%
238340	0.0%	1.1%	0.6%	0.0%	4.5%	6.4%	93.6%	100.0%
238350	0.4%	0.8%	0.4%	0.0%	4.2%	5.8%	94.2%	100.0%
238390	0.5%	0.9%	0.0%	0.0%	2.7%	4.1%	95.9%	100.0%
238910	9.3%	12.4%	1.8%	1.8%	13.1%	38.3%	61.7%	100.0%
238990	2.5%	2.9%	0.4%	0.2%	5.3%	11.4%	88.6%	100.0%
314999	0.4%	0.8%	0.0%	0.0%	18.1%	19.3%	80.7%	100.0%
316998	1.5%	0.0%	0.0%	0.0%	4.6%	6.2%	93.8%	100.0%
321114	0.0%	0.0%	0.0%	0.0%	33.3%	33.3%	66.7%	100.0%
323111	1.3%	1.3%	1.1%	0.3%	8.6%	13.4%	86.6%	100.0%
324110	2.7%	0.0%	0.0%	0.0%	1.4%	4.1%	95.9%	100.0%
324121	0.0%	18.2%	0.0%	0.0%	4.5%	22.7%	77.3%	100.0%
326122	0.0%	0.0%	0.0%	0.0%	18.2%	18.2%	81.8%	100.0%
327110	0.0%	0.0%	0.0%	0.0%	5.0%	5.0%	95.0%	100.0%

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
327320	0.9%	0.9%	0.0%	0.0%	11.8%	14.5%	85.5%	100.0%
327332	0.0%	5.9%	0.0%	0.0%	0.0%	5.9%	94.1%	100.0%
327410	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
331110	0.0%	0.0%	0.0%	0.0%	5.4%	5.4%	94.6%	100.0%
331210	0.0%	11.1%	0.0%	0.0%	0.0%	11.1%	88.9%	100.0%
331221	0.0%	0.0%	0.0%	0.0%	7.1%	7.1%	92.9%	100.0%
331511	0.0%	0.0%	0.0%	0.0%	22.2%	22.2%	77.8%	100.0%
332312	0.8%	5.5%	0.8%	0.8%	11.7%	19.5%	80.5%	100.0%
332618	0.0%	0.0%	0.0%	0.0%	9.4%	9.4%	90.6%	100.0%
332996	0.0%	0.0%	0.0%	0.0%	5.3%	5.3%	94.7%	100.0%
332999	1.4%	1.4%	1.4%	0.0%	4.2%	8.3%	91.7%	100.0%
333120	0.0%	0.0%	0.0%	0.0%	5.3%	5.3%	94.7%	100.0%
337215	0.0%	8.7%	4.3%	0.0%	0.0%	13.0%	87.0%	100.0%
339950	1.2%	0.6%	1.0%	0.2%	7.0%	10.7%	89.3%	100.0%
423320	0.3%	1.5%	1.8%	0.0%	4.3%	8.3%	91.7%	100.0%
423390	1.4%	1.4%	0.0%	0.0%	5.5%	8.2%	91.8%	100.0%
423440	0.6%	0.5%	0.3%	0.2%	2.6%	4.2%	95.8%	100.0%
423510	0.0%	2.2%	0.0%	0.3%	2.8%	5.6%	94.4%	100.0%
423610	0.8%	2.2%	1.0%	0.2%	7.3%	12.2%	87.8%	100.0%
423710	0.0%	0.5%	1.1%	0.0%	7.6%	9.8%	90.2%	100.0%
423720	0.5%	1.0%	0.0%	0.0%	8.8%	10.3%	89.7%	100.0%
423740	0.0%	1.9%	3.8%	1.9%	7.7%	15.4%	84.6%	100.0%
423820	0.0%	0.0%	0.0%	0.0%	3.8%	3.8%	96.3%	100.0%
423840	1.1%	1.3%	1.1%	1.1%	7.4%	12.2%	87.8%	100.0%
424120	1.3%	1.3%	3.3%	0.0%	16.3%	22.9%	77.1%	100.0%
424590	0.0%	1.2%	0.0%	0.0%	1.2%	2.4%	97.6%	100.0%
424690	2.4%	1.4%	0.0%	1.4%	6.7%	12.0%	88.0%	100.0%
424710	7.1%	0.0%	0.0%	0.0%	7.1%	14.3%	85.7%	100.0%
424720	0.5%	0.0%	0.0%	0.0%	2.9%	3.4%	96.6%	100.0%
424950	0.0%	0.7%	0.0%	0.7%	2.9%	4.4%	95.6%	100.0%

City of Fort Worth Disparity Study 2020

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
444120	0.0%	0.6%	0.0%	0.3%	2.5%	3.5%	96.5%	100.0%
444190	0.0%	0.7%	0.2%	0.0%	4.6%	5.6%	94.4%	100.0%
453998	0.3%	0.1%	0.1%	0.1%	3.6%	4.4%	95.6%	100.0%
454310	0.0%	0.0%	0.0%	0.0%	2.8%	2.8%	97.2%	100.0%
484110	1.8%	1.0%	0.0%	0.0%	2.1%	5.2%	94.8%	100.0%
484121	4.5%	0.9%	0.2%	0.0%	3.3%	9.2%	90.8%	100.0%
484220	20.4%	37.0%	0.3%	1.2%	9.6%	69.1%	30.9%	100.0%
484230	3.2%	1.1%	0.0%	0.0%	5.3%	12.6%	87.4%	100.0%
488410	0.3%	0.0%	0.0%	0.0%	3.9%	4.5%	95.5%	100.0%
488999	1.0%	0.1%	0.1%	0.0%	1.6%	2.9%	97.1%	100.0%
517311	0.7%	0.7%	1.7%	0.3%	3.8%	7.7%	92.3%	100.0%
519110	0.0%	0.0%	0.0%	0.0%	12.5%	12.5%	87.5%	100.0%
524126	0.2%	0.4%	0.0%	0.0%	1.4%	2.2%	97.8%	100.0%
531320	0.9%	0.4%	0.0%	0.4%	6.1%	8.7%	91.3%	100.0%
531390	5.8%	0.0%	2.5%	0.0%	6.7%	15.8%	84.2%	100.0%
532412	0.0%	1.0%	1.0%	0.0%	2.0%	5.1%	94.9%	100.0%
532490	0.3%	0.3%	0.0%	0.0%	1.5%	2.2%	97.8%	100.0%
541191	0.0%	1.7%	0.0%	0.0%	5.1%	6.8%	93.2%	100.0%
541211	1.2%	0.5%	0.2%	0.0%	5.0%	7.1%	92.9%	100.0%
541310	2.4%	2.4%	1.1%	0.6%	5.6%	12.7%	87.3%	100.0%
541320	0.4%	0.6%	0.0%	0.1%	3.9%	5.0%	95.0%	100.0%
541330	3.9%	5.3%	6.4%	1.0%	7.8%	25.0%	75.0%	100.0%
541340	0.0%	0.0%	0.0%	0.0%	3.6%	3.6%	96.4%	100.0%
541350	4.0%	1.0%	1.0%	0.0%	5.9%	11.9%	88.1%	100.0%
541370	1.6%	4.8%	0.5%	1.1%	5.3%	13.8%	86.2%	100.0%
541380	2.0%	2.6%	2.8%	0.0%	10.2%	17.8%	82.2%	100.0%
541420	0.0%	0.0%	0.0%	0.0%	17.8%	17.8%	82.2%	100.0%
541611	2.3%	0.6%	0.5%	0.1%	4.8%	8.6%	91.4%	100.0%
541613	1.4%	0.5%	0.4%	0.1%	4.6%	7.3%	92.7%	100.0%
541620	2.5%	1.2%	0.9%	0.0%	10.6%	15.8%	84.2%	100.0%

NAICS	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
541715	1.5%	0.6%	2.6%	0.0%	3.8%	8.5%	91.5%	100.0%
541720	1.7%	0.3%	0.0%	0.0%	3.1%	5.1%	94.9%	100.0%
541820	2.9%	0.0%	0.0%	0.0%	12.8%	16.2%	83.8%	100.0%
541990	0.6%	0.3%	0.1%	0.0%	4.2%	5.4%	94.6%	100.0%
561311	2.8%	1.5%	1.4%	0.3%	8.1%	15.1%	84.9%	100.0%
561320	6.8%	4.3%	6.0%	0.4%	13.5%	31.5%	68.5%	100.0%
561440	3.2%	0.0%	0.8%	0.0%	4.0%	7.9%	92.1%	100.0%
561499	0.5%	0.2%	0.2%	0.0%	1.7%	2.7%	97.3%	100.0%
561621	3.2%	1.0%	0.7%	0.2%	5.2%	10.6%	89.4%	100.0%
561720	3.3%	1.4%	0.9%	0.3%	7.1%	13.3%	86.7%	100.0%
561730	0.9%	0.8%	0.1%	0.0%	3.5%	5.5%	94.5%	100.0%
561790	1.0%	0.6%	0.1%	0.0%	3.4%	5.1%	94.9%	100.0%
561910	0.0%	2.7%	0.0%	1.3%	9.3%	13.3%	86.7%	100.0%
561990	1.2%	0.3%	0.1%	0.1%	1.8%	3.6%	96.4%	100.0%
562111	6.3%	0.0%	0.0%	0.0%	18.8%	25.0%	75.0%	100.0%
562910	18.6%	14.4%	4.2%	3.4%	21.2%	62.7%	37.3%	100.0%
562991	0.0%	1.1%	0.0%	0.0%	7.5%	8.6%	91.4%	100.0%
811310	0.3%	1.2%	0.6%	0.1%	3.0%	5.3%	94.7%	100.0%
Total	1.8%	1.4%	0.5%	0.2%	3.9%	8.0%	92.0%	100.0%

Source: CHA analysis of the City data; Hoovers; CHA Master Directory.

Table 4-7: Share of the City Spending on the City of Fort Worth’s Contracts by NAICS Code

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
212312	Crushed and Broken Limestone Mining and Quarrying	0.0%
212321	Construction Sand and Gravel Mining	0.0%
213112	Support Activities for Oil and Gas Operations	0.0%
221320	Sewage Treatment Facilities	0.0%
221330	Steam and Air-Conditioning Supply	0.1%
236210	Industrial Building Construction	0.0%

City of Fort Worth Disparity Study 2020

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
236220	Commercial and Institutional Building Construction	8.5%
237110	Water and Sewer Line and Related Structures Construction	29.0%
237120	Oil and Gas Pipeline and Related Structures Construction	0.1%
237310	Highway, Street, and Bridge Construction	32.3%
237990	Other Heavy and Civil Engineering Construction	1.5%
238110	Poured Concrete Foundation and Structure Contractors	0.8%
238120	Structural Steel and Precast Concrete Contractors	0.7%
238140	Masonry Contractors	0.3%
238150	Glass and Glazing Contractors	0.0%
238160	Roofing Contractors	0.3%
238190	Other Foundation, Structure, and Building Exterior Contractors	0.3%
238210	Electrical Contractors and Other Wiring Installation Contractors	3.0%
238220	Plumbing, Heating, and Air-Conditioning Contractors	1.2%
238290	Other Building Equipment Contractors	0.0%
238310	Drywall and Insulation Contractors	0.3%
238320	Painting and Wall Covering Contractors	0.1%
238330	Flooring Contractors	0.1%
238340	Tile and Terrazzo Contractors	0.0%
238350	Finish Carpentry Contractors	0.1%
238390	Other Building Finishing Contractors	0.2%
238910	Site Preparation Contractors	1.4%
238990	All Other Specialty Trade Contractors	0.7%
314999	All Other Miscellaneous Textile Product Mills	0.0%
316998	All Other Leather Good and Allied Product Manufacturing	0.0%
321114	Wood Preservation	0.0%
323111	Commercial Printing (except Screen and Books)	0.0%
324110	Petroleum Refineries	0.0%
324121	Asphalt Paving Mixture and Block Manufacturing	1.4%

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
326122	Plastics Pipe and Pipe Fitting Manufacturing	0.0%
327110	Pottery, Ceramics, and Plumbing Fixture Manufacturing	0.0%
327320	Ready-Mix Concrete Manufacturing	1.2%
327332	Concrete Pipe Manufacturing	0.1%
327410	Lime Manufacturing	0.0%
331110	Iron and Steel Mills and Ferroalloy Manufacturing	0.0%
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	0.0%
331221	Rolled Steel Shape Manufacturing	0.0%
331511	Iron Foundries	0.1%
332312	Fabricated Structural Metal Manufacturing	0.3%
332618	Other Fabricated Wire Product Manufacturing	0.0%
332996	Fabricated Pipe and Pipe Fitting Manufacturing	0.0%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	0.1%
333120	Construction Machinery Manufacturing	0.0%
337215	Showcase, Partition, Shelving, and Locker Manufacturing	0.0%
339950	Sign Manufacturing	0.0%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	1.0%
423390	Other Construction Material Merchant Wholesalers	0.1%
423440	Other Commercial Equipment Merchant Wholesalers	0.0%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	1.8%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	0.7%
423710	Hardware Merchant Wholesalers	0.0%
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	0.1%
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	0.0%
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	0.0%

City of Fort Worth Disparity Study 2020

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
423840	Industrial Supplies Merchant Wholesalers	1.2%
424120	Stationery and Office Supplies Merchant Wholesalers	0.0%
424590	Other Farm Product Raw Material Merchant Wholesalers	0.0%
424690	Other Chemical and Allied Products Merchant Wholesalers	0.0%
424710	Petroleum Bulk Stations and Terminals	0.0%
424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	0.3%
424950	Paint, Varnish, and Supplies Merchant Wholesalers	0.0%
444120	Paint and Wallpaper Stores	0.0%
444190	Other Building Material Dealers	0.2%
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	0.0%
454310	Fuel Dealers	0.0%
484110	General Freight Trucking, Local	0.5%
484121	General Freight Trucking, Long-Distance, Truckload	0.0%
484220	Specialized Freight (except Used Goods) Trucking, Local	1.8%
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	0.0%
488410	Motor Vehicle Towing	0.0%
488999	All Other Support Activities for Transportation	0.0%
517311	Wired Telecommunications Carriers	0.0%
519110	News Syndicates	0.0%
524126	Direct Property and Casualty Insurance Carriers	0.1%
531320	Offices of Real Estate Appraisers	0.0%
531390	Other Activities Related to Real Estate	0.0%
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	0.1%
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	0.0%
541191	Title Abstract and Settlement Offices	0.0%
541211	Offices of Certified Public Accountants	0.0%

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
541310	Architectural Services	0.0%
541320	Landscape Architectural Services	0.0%
541330	Engineering Services	5.2%
541340	Drafting Services	0.0%
541350	Building Inspection Services	0.0%
541370	Surveying and Mapping (except Geophysical) Services	0.3%
541380	Testing Laboratories	0.2%
541420	Industrial Design Services	0.0%
541611	Administrative Management and General Management Consulting Services	0.0%
541613	Marketing Consulting Services	0.0%
541620	Environmental Consulting Services	0.0%
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	0.0%
541720	Research and Development in the Social Sciences and Humanities	0.0%
541820	Public Relations Agencies	0.0%
541990	All Other Professional, Scientific, and Technical Services	0.0%
561311	Employment Placement Agencies	0.0%
561320	Temporary Help Services	0.0%
561440	Collection Agencies	0.1%
561499	All Other Business Support Services	0.0%
561621	Security Systems Services (except Locksmiths)	0.0%
561720	Janitorial Services	0.4%
561730	Landscaping Services	1.2%
561790	Other Services to Buildings and Dwellings	0.0%
561910	Packaging and Labeling Services	0.0%
561990	All Other Support Services	0.2%
562111	Solid Waste Collection	0.0%
562910	Remediation Services	0.1%

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
562991	Septic Tank and Related Services	0.0%
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0.0%
Total		100.0%

Source: CHA analysis of the City data.

Using the “custom census” approach to estimating availability and the further assignment of race and gender using the FCDF, the Master M/WBE Directory and other sources, we determined the aggregated availability of M/WBEs, weighted by the City’s spending in its geographic and industry markets, to be 25.4 percent for City contracts. Table 4-8 presents the weighted availability data for all product sectors combined for the racial and gender categories.

Table 4-8: Aggregated Weighted Availability for the City of Fort Worth’s Contracts

Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE	Total
6.6%	9.2%	1.7%	0.7%	6.9%	25.4%	74.6%	100.0%

Source: CHA analysis of the City data; Hoovers; CHA Master Directory.

To meet the strict scrutiny test that requires that all groups must have suffered discrimination in the City’s markets to be eligible for credit towards meeting M/WBE contract goals, we next calculated disparity ratios comparing the City’s utilization of M/WBEs as prime contractors and subcontractors to the availability of these firms in its market areas. Table 4-9 presents these results for City-funded contracts.

Table 4-9: Disparity Ratios by Demographic Group

	Black	Hispanic	Asian	Native American	White Women	M/WBE	Non-M/WBE
Disparity Ratio	36.2% [‡]	108.0%	144.1%	53.8% [‡]	101.0%	86.9% [*]	104.5% [*]

Source: CHA analysis of the City data; Hoovers; CHA Master Directory.

[‡] Indicates substantive significance

^{*}Indicates statistical significance at the 0.05 level¹²⁵

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

It is the standard CHA practice to explore any M/WBE disparity ratio that exceeds 100 percent. This is to ensure that an abnormal pattern of M/WBE concentration does not account for disparity ratios greater than 100 percent. This exploration entails further examination of any NAICS codes where:

- The NAICS codes share of overall spending is relatively high; or
- The particular M/WBE utilization in that code is relatively high.

Hispanic Disparity Ratio

The Hispanic disparity ratio was 108.0 percent. NAICS code 541330 (Engineering Services) contained 5.4 percent of all City spending (the fourth highest of all NAICS codes) and the Hispanic utilization in that code was 28.0 percent – higher than the overall Hispanic utilization of 10.0 percent. Table 4-10 compares Hispanic and non-M/WBE outcomes in this code.

Table 4-10: Hispanic Versus Non-M/WBE Outcomes in NAICS Code 541330 (Engineering Services)

	Hispanic	Non-M/WBE
NAICS code share of all spending	14.6%	3.5%
Number of firms	14	27
Share of group spending in NAICS code by the largest firm	39.8%	34.0%
Share of group spending in NAICS code by the second largest firm	25.6%	21.1%
Share of group spending in NAICS code by the third largest firm	13.2%	10.6%
Individual firm share of group spending in NAICS code by the remaining firms	Under 9%	The rest under 4%
Share of group spending in NAICS code by the three largest firms	78.6%	65.7%
Share of group spending in NAICS code by the remaining firms	22.4%	34.3%

We find a much higher level of concentration among Hispanic firms compared to non-M/WBE firms. Overall spending is more concentrated in this code: Hispanics received 14.6 percent as compared to non-M/WBEs that received 3.5 percent. Further, the spending was concentrated in a smaller number of firms: only 14 Hispanic firms received dollars in this code as compared to 27 non-M/WBEs. Lastly, the largest three Hispanic firms captured a larger share of overall

spending compared to the largest three non-M/WBE firms: 78.6 percent of the Hispanic dollars as compared to 65.7 percent of non-M/WBE dollars.

Asian Disparity Ratio

The Asian disparity ratio was 144.1 percent. NAICS code 237310 (Highway, Street, and Bridge Construction) contained 32.3 percent of all City spending (the highest of all NAICS codes) and the Asian utilization in that code was 5.1 percent – twice the overall Asian utilization of 2.5 percent. Table 4-10 compares Asian and non-M/WBE outcomes in this code.

Table 4-11: Asian Versus Non-M/WBE Outcomes in NAICS Code 237310 (Highway, Street, and Bridge Construction)

	Asian	Non-M/WBE
NAICS code share of all spending	66.4%	36.3%
Number of firms	5	58
Share of group spending in NAICS code by the largest firm	52.9%	30.7%
Share of group spending in NAICS code by the second largest firm	24.1%	10.1%
Share of group spending in NAICS code by the third largest firm	16.8%	9.4%
Individual firm share of group spending in NAICS code by the remaining firms	The rest under 4%	The rest under 9.0%
Share of group spending in NAICS code by the three largest firms	93.8%	50.2%
Share of group spending in NAICS code by the remaining firms	6.2%	49.8%

We find a much higher level of concentration among Asian firms compared to non-M/WBE firms. Overall spending is more concentrated in this code: Asians received 66.4 percent as compared to non-M/WBEs that received 36.3 percent. Further, the spending was concentrated in a smaller number of firms: only 5 Asian firms received dollars in this code as compared to 58 non-M/WBEs. Lastly, the largest three Asian firms capture a larger share of overall spending compared to the largest three non-M/WBE firms: 93.8 percent of the Asian dollars as compared to 50.2 percent of non-M/WBE dollars.

White Women Disparity Ratio

The White women disparity ratio was 101.1 percent. NAICS 236220 (Commercial and Institutional Building Construction) contained 8.5 percent of all City spending (the third highest of all NAICS codes) and the White women utilization in that code was 14.1.0 percent – far higher than the overall White women utilization of 6.9 percent. Table 4-12 compares White women and non-M/WBE outcomes in this code.

Table 4-12: White Women Versus Non-M/WBE Outcomes in NAICS Code 541330 (Engineering Services)

	White Women	Non-M/WBE
NAICS code share of all spending	17.2%	9.1%
Number of firms	3	9
Share of group spending in NAICS code by the largest firm	92.5%	65.1%
Share of group spending in NAICS code by the second largest firm	4.9%	13.5%
Share of group spending in NAICS code by the third largest firm	2.6%	11.5%
Individual firm share of group spending in NAICS code by the remaining firms	NA	The rest under 4%
Share of group spending in NAICS code by the three largest firms	100.0%	90.1%
Share of group spending in NAICS code by the remaining firms	0.0%	9.9%

We find a much higher level of concentration among White women firms compared to non-M/WBE firms. Overall spending is more concentrated in this code: White women received 17.2 percent as compared to non-M/WBEs that received 9.1 percent. Further, the spending was concentrated in a small number of firms: only three White women firms received dollars in this code as compared to 9 non-M/WBEs. Lastly, the largest three White women firms capture a larger share of overall spending compared to the largest three non-M/WBE firms: 100.0 percent of the White women dollars as compared to 90.1 percent of non-M/WBE dollars.

We conclude from this exploration that the disparity ratios exceeding 100 percent most likely can be explained by the unusual pattern of firm concentration within some NAICS codes.

V. ANALYSIS OF ECONOMY-WIDE DISPARITIES IN THE CITY OF FORT WORTH'S MARKETS

A. Introduction

The late Nobel Prize Laureate Kenneth Arrow, in his seminal paper on the economic analysis of discrimination, observed:

Racial discrimination pervades every aspect of a society in which it is found. It is found above all in attitudes of both races, but also in social relations, in intermarriage, in residential location, and frequently in legal barriers. It is also found in levels of economic accomplishment; this is income, wages, prices paid, and credit extended.¹²⁶

This Chapter explores the data and literature relevant to how discrimination in the City of Fort Worth's ("the City") market and throughout the wider economy affects the ability of minorities and women to fairly and fully engage in the City's contract opportunities. First, we analyzed the rates at which M/WBEs in the Dallas-Fort Worth metropolitan area form firms and their earnings from those firms.¹²⁷ Next, we looked at the number of sales and receipts, number of employees and payroll for M/WBE firms in the State of Texas. Then, we summarized the literature on barriers to equal access to commercial credit. Finally, we summarized the literature on barriers to equal access to human capital. All three types of evidence have been found by the courts to be relevant and probative of whether a government will be a passive participant in discrimination without some types of affirmative intervention.

A key element to determine the need for government intervention through contract goals in the sectors of the economy where the City procures goods and services is an analysis of the extent of disparities in those sectors independent of the agency's intervention through its contracting affirmative action programs.

The courts have repeatedly held that analysis of disparities in the rates at which M/WBEs in the government's markets form businesses compared to similar non-

126. Arrow, Kenneth J., "What Has Economics to say about racial discrimination?" *Journal of Economic Perspectives*, (1998), 12(2), pp. 91-100.

127. The Dallas-Fort Worth metropolitan area encompassed the counties of Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, and Tarrant.

M/WBEs show that their earnings from such businesses, and their access to capital markets are highly relevant to the determination of whether the market functions properly for all firms regardless of the race or gender of their ownership.¹²⁸ These analyses contributed most recently to the successful defense of the Illinois Tollway's Disadvantaged Business Enterprise (DBE) Program.¹²⁹ As explained by the Tenth Circuit in upholding the U.S. Department of Transportation's DBE program, this type of evidence

demonstrates the existence of two kinds of discriminatory barriers to minority subcontracting enterprises, both of which show a strong link between racial disparities in the federal government's disbursements of public funds for construction contracts and the channeling of those funds due to private discrimination. The first discriminatory barriers are to the formation of qualified minority subcontracting enterprises due to private discrimination, precluding from the outset competition for public construction contracts by minority enterprises. The second discriminatory barriers are to fair competition between minority and non-minority subcontracting enterprises, again due to private discrimination, precluding existing minority firms from effectively competing for public construction contracts. The government also presents further evidence in the form of local disparity studies of minority subcontracting and studies of local subcontracting markets after the removal of affirmative action programs... The government's evidence is particularly striking in the area of the race-based denial of access to capital, without which the formation of minority subcontracting enterprises is stymied.¹³⁰

Business discrimination studies and lending studies are relevant and probative because they show a strong link between the disbursement of public funds and the channeling of those funds due to private discrimination.

"Evidence that private discrimination results in barriers to business formation is relevant because it demonstrates that M/WBEs are precluded *at the outset* from competing for public construction contracts. Evidence of barriers to fair competition is also relevant because it again demonstrates that *existing* M/WBEs are precluded from competing for public contracts."¹³¹

128. See the discussion in Chapter II of the legal standards applicable to contracting affirmative action programs.

129. *Midwest Fence Corp. v. Illinois Department of Transportation, Illinois State Toll Highway Authority et al*, 840 F.3d 942 (7th Cir. 2016) (upholding the Illinois Tollway's program for state funded contracts modeled after Part 26 and based on CHA's expert testimony, including about disparities in the overall Illinois construction industry); see also *Builders Association of Greater Chicago v. City of Chicago*, 298 F.Supp.2d 725 (N.D. Ill. 2003) (holding that the City of Chicago's M/WBE program for local construction contracts met the compelling interest prong using this framework).

130. *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1168-1169 (10th Cir. 2000), cert. granted, 532 U.S. 941, then dismissed as improvidently granted, 534 U.S. 103 (2001) ("*Adarand VII*").

131. *Id.*

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

For example, in unanimously upholding the USDOT DBE program, the courts agree that disparities between the earnings of minority-owned firms and similarly situated non-minority owned firms and the disparities in commercial loan denial rates between Black business owners compared to similarly situated non-minority business owners are strong evidence of the continuing effects of discrimination.¹³² The Eighth Circuit Court of Appeals took a “hard look” at the evidence Congress considered, and concluded that the legislature had

spent decades compiling evidence of race discrimination in government highway contracting, of barriers to the formation of minority-owned construction businesses, and of barriers to entry. In rebuttal, [the plaintiffs] presented evidence that the data were susceptible to multiple interpretations, but they failed to present affirmative evidence that no remedial action was necessary because minority-owned small businesses enjoy non-discriminatory access to and participation in highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.¹³³

Likewise, in holding that the DBE program regulations meet strict scrutiny, the court in the *Western States* opinion relied on the “substantial body of statistical and anecdotal materials” considered by Congress, including studies based on Census data that provide “ample” evidence of barriers to the formation of minority-owned firms in the transportation contracting industry.¹³⁴

This type of court-approved analysis is especially important for an agency such as the City, which has been implementing versions of an M/WBE program for many years. The City’s remedial market interventions through the use of contract goals may ameliorate the disparate impacts of marketplace discrimination in the agency’s own contracting activities. Put another way, the program’s success in moving towards parity for minority and women firms may be “masking” the

132. *Northern Contracting, Inc. v. Illinois Department of Transportation*, 2005 U.S. Dist. LEXIS 19868, at *64 (Sept. 8, 2005).

133. *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d 964, 970 (8th Cir. 2003), *cert. denied*, 541 U.S. 1041 (2004); *see also Adarand VII*, 228 F.3d at 1175 (plaintiff has not met its burden “of introducing credible, particularized evidence to rebut the government’s initial showing of the existence of a compelling interest in remedying the nationwide effects of past and present discrimination in the federal construction procurement subcontracting market.”).

134. *Western States Paving Co., Inc. v. Department of Transportation*, 407 F.3d 983, 993 (9th Cir. 2005), *cert. denied*, 546 U.S. 1170 (2006).

effects of discrimination that otherwise would result in disparities in M/WBE utilization that mirror that of the overall economy.

To explore the question of whether firms owned by Non-Whites and White Women face disparate treatment in the City's marketplace outside of City contracts, we examined the U.S. Bureau of the Census' *American Community Survey* which allows us to examine disparities using individual entrepreneurs as the basic unit of analysis.¹³⁵ We used the nine-county Dallas Fort Worth metropolitan area as the geographic unit of analysis.

We found disparities in wages, business earnings and business formation rates for minorities and women in all industry sectors in the City of Fort Worth's marketplace.

B. Disparate Treatment in the Marketplace: Evidence from the Census Bureau's 2014 - 2018 American Community Survey

As discussed in the beginning of this Chapter, the key question is whether firms owned by Non-Whites and White Women face disparate treatment in the marketplace without the intervention of the City's programs. In this section, we explore this and other aspects of this question using the Census Bureau's *American Community Survey* data. One element asks if demographic differences exist in the wage and salary income received by private sector workers. Beyond the issue of bias in the incomes generated in the private sector, this exploration is important for the issue of possible variations in the rate of business formation by different demographic groups. One of the determinants of business formation is the pool of financial capital at the disposal of the prospective entrepreneur. The size of this pool is related to the income level of the individual either because the income level impacts the amount of personal savings that can be used for start-up capital or the income level affects one's ability to borrow funds. Consequently, if particular demographic groups receive lower wages and salaries, then they would have access to a smaller pool of financial capital, and thus reduce the likelihood of business formation.

The *American Community Survey* ("ACS") *Public Use Microdata Sample* ("PUMS") is useful in addressing these issues. The ACS is an annual survey of one percent of the population and the PUMS provides detailed information at the individual level. In order to obtain robust results from our analysis, we used the file that combines the most recent data available for the years 2014 through 2018.¹³⁶ With this rich

135. Data from 2014 - 2018 American Community Survey are the most recent for a five-year period.

136. For more information about the ACS PUMS, see <http://www.census.gov/acs/>.

data set, our analysis can establish with greater certainty any causal links between race, gender and economic outcomes.

Often, the general public sees clear associations between race, gender, and economic outcomes and assumes this association reflects a tight causal connection. However, economic outcomes are determined by a broad set of factors, including and extending beyond, race and gender. To provide a simple example, two people who differ by race or gender may receive different wages. This difference may simply reflect that the individuals work in different industries. If this underlying difference is not known, one might assert the wage differential is the result of race or gender difference. To better understand the impact of race or gender on wages, it is important to compare individuals of different races or genders who work in the same industry. Of course, wages are determined by a broad set of factors beyond race, gender, and industry. With the ACS PUMS, we have the ability to include a wide range of additional variables such as age, education, occupation, and state of residence in the analysis.

We employ a multiple regression statistical technique to process this data. This methodology allows us to obtain two results: an estimation of how variations in certain characteristics (called independent variables) will impact the level of some particular outcome (called a dependent variable), and a determination of how confident we are that the estimated variation is statistically different from zero. We have provided more detail on this technique in Appendix A.

With respect to the first step of the regression analysis, we will examine how variations in the race, gender, and industry of individuals impact the wages and other economic outcomes received by individuals. The technique allows us to determine the effect of changes in one variable, assuming that the other determining variables are the same. That is, we compare individuals of different races, but of the same gender and in the same industry; or we compare individuals of different genders, but of the same race and the same industry; or we compare individuals in different industries, but of the same race and gender. We are determining the impact of changes in one variable (*e.g.*, race, gender or industry) on another variable (wages), “controlling for” the movement of any other independent variables.

With respect to the second step of the regression analysis, we will determine the statistical significance of the relationship between the dependent variable and independent variable. For example, the relationship between gender and wages might exist, but we find that it is not statistically different from zero. In this case, we are not confident that there is any relationship between the two variables. If the relationship is not statistically different from zero, then a variation in the independent variable has no impact on the dependent variable. The regression analysis allows us to say with varying degrees of statistical confidence that a relationship is different from zero. If the estimated relationship is statistically significant at the 0.05 level, that indicates we are 95 percent confident that the relationship is dif-

ferent from zero; if the estimated relationship is statistically significant at the 0.01 level, that indicates we are 99 percent confident that the relationship is different from zero; if the estimated relationship is statistically significant at the 0.001 level, that indicates we are 99.9 percent confident that the relationship is different from zero.¹³⁷

In the following presentation of results, each sub-section first reports data on the share of a demographic group that forms a business (business formation rates); the probabilities that a demographic group will form a business relative to White men (business formation probabilities); the differences in wages received by a demographic group relative to White men (wage differentials); and the differences in business earnings received by a demographic group relative to White men (business earnings differentials).

1. All Industries Combined in the Dallas Fort Worth Metropolitan Area

One method of exploring differences in economic outcomes is to examine the rate at which different demographic groups form businesses. We developed these business formation rates using data from the U.S. Bureau of the Census' *American Community Survey*. Table 5-1 presents these results. The table indicates that White men have higher business formation rates compared to Non-Whites and White Women. Table 5-2 utilizes probit regression analysis to examine the probability of forming a business after controlling for important factors beyond race and gender.¹³⁸ This table indicates that Non-Whites (except for Asian/Pacific Islanders) and White Women are less likely to form businesses compared to similarly situated White men. The reduced probabilities of business formation ranged from 3.3 percent for Blacks to 1.2 percent for Others. These results were statistically significant at the 0.001 level for Blacks, Hispanics, and White women.

Another way to measure equity is to examine how the wage and salary incomes and business earnings of particular demographic groups compare to White men. Multiple regression statistical techniques allowed us to examine the impact of race and gender on economic outcomes while controlling for other factors, such as education and age.¹³⁹ Tables 5-3 and 5-4 present this data on wage and salary incomes and business earnings respectively. Table 5-3 indicates that Non-whites and White women earn less than White men. The reduction in earnings ranges from 40.3 percent to 18.2 percent and all of the

137. Most social scientists do not endorse utilizing a confidence level of less than 95 percent. Appendix C explains more about statistical significance.

138. Appendix B provides a "Further Explanation of Probit Regression Analysis."

139. See Appendix A for more information on multiple regression statistical analysis.

results are statistically significant at the 0.001 level. Table 5-4 indicates that except for Asian/Pacific Islanders, Non-whites and White women receive business earnings less than White men. The reduction in earnings ranges from 223.0 percent to 17.4 percent.¹⁴⁰

Table 5-1: Business Formation Rates
All Industries, 2014 - 2018¹⁴¹

Demographic Group	Business Formation Rates
Black	1.7%
Hispanic	1.9%
Native American	4.0%
Asian/Pacific Islander	5.2%
Other	3.9%
White Women	3.3%
Non-White Male	2.5%
White Male	5.7%

Source: CHA calculations from the American Community Survey.

140. The proper way to interpret a coefficient that is less than negative 100 percent (*e.g.*, the value of the coefficient for Other in Table 4-4), is the percentage amount non-M/WBEs earn that is more than the group in question. In this case, non-M/WBEs earn 223 percent more than Others.

141. Statistical significance tests were not conducted on basic business formation rates.

**Table 5-2: Business Formation Probabilities Relative to White Males
All Industries, 2014 - 2018**

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-3.3%***
Hispanic	-2.3%***
Native American	---- ^a
Asian/Pacific Islander	0.1%
Other	----
White Women	-2.0%***

a. Many times, there were not sufficient observations in the sampled data to conduct a reliable statistical analysis. In these instances, the tables will contain the symbol “----”. There were only 15 observations for Native Americans and 14 for Others. For the balance of the ACS analysis, we will not provide estimates concerning business outcomes for these two groups. We will report on estimates for wage outcomes for these groups where possible.

*Source: CHA calculations from the American Community Survey.
*** Indicates statistical significance at the 0.001 level.*

**Table 5-3: Wage Differentials for Selected Groups Relative to White Men
All Industries, 2014 - 2018**

Demographic Group	Wages Relative to White Men (% Change)
Black	-35.4%***
Hispanic	-18.2%***
Native American	-35.3%***
Asian/Pacific Islander	-34.3%***
Other	-40.3%***
White Women	-31.9%***

*Source: CHA calculations from the American Community Survey.
*** Indicates statistical significance at the 0.001 level.*

**Table 5-4: Business Earnings Differentials for Selected Groups Relative to White Men
All Industries**

Demographic Group	Earnings Relative to White Men (% Change)
Black	-53.5%**
Hispanic	-23.3%
Native American	-----
Asian/Pacific Islander	31.1%
Other	-----
White Women	-55.2%***

Source: CHA calculations from the American Community Survey.

*** Indicates statistical significance at the 0.001 level.

** Indicates statistical significance at the 0.01 level.

2. The Construction Industry in the Dallas Fort Worth Metropolitan Area

Table 5-5 indicates that White men have higher business formation rates compared to Non-Whites and White Women. Table 5-6 indicates that Non-Whites (except for Asian/Pacific Islanders) and White Women are less likely to form businesses compared to similarly situated White men. The reduced probabilities of business formation ranged from 3.9 percent to 2.5 percent. Table 5-7 indicates that Non-whites and White women earn less than White men. The statistically significant reductions in earnings range from 8.4 percent to 58.5 percent. Table 5-8 indicates that none of the business coefficient were statistically significant.

**Table 5-5: Business Formation Rates
Construction, 2014 - 2018**

Demographic Group	Business Formation Rates
Black	6.6%
Hispanic	2.9%
Native American	-----
Asian/Pacific Islander	9.1%
Other	-----

Demographic Group	Business Formation Rates
White Women	7.9%
Non-White Male	3.7%
White Male	11.1%

Source: CHA calculations from the American Community Survey.

Table 5-6: Business Formation Probability Differentials for Selected Groups Relative to White Men, Construction, 2014 - 2018

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-2.5%
Hispanic	-3.3%***
Native American	-----
Asian/Pacific Islander	0.5%
Other	-----
White Women	-3.9%***

Source: CHA calculations from the American Community Survey.

*** Indicates statistical significance at the 0.001 level.

Table 5-7: Wage Differentials for Selected Groups Relative to White Men Construction, 2014 - 2018

Demographic Group	Wages Relative to White Men (% Change)
Black	-32.3%***
Hispanic	-8.4%***
Native American	-58.5%**
Asian/Pacific Islander	-48.4%***
Other	-15.4%
White Women	-21.3%***

Source: CHA calculations from the American Community Survey.

*** Indicates statistical significance at the 0.001 level.

** Indicates statistical significance at the 0.01 level.

Table 5-8: Business Earnings Differentials for Selected Groups Relative to White Men
Construction, 2014 - 2018

Demographic Group	Earnings Relative to White Men (% Change)
Black	23.0%
Hispanic	-30.2%
Native American	-----
Asian/Pacific Islander	-71.6%
Other	-----
White Women	38.2%

Source: CHA calculations from the American Community Survey.

3. The Construction-Related Services Industry in the Dallas Fort Worth Metropolitan Area

In addition to the low number of Native American and Other firms mentioned in footnote 17, there were low numbers of Blacks (6), Hispanics (10), Asians (3), and White women (7) sampled in the construction-related services industry. Consequently, reliable estimates could not be made for these groups. Table 5-11 indicates that Non-whites (except for Native Americans) and White women earn less than White men.

Table 5-9: Business Formation Rates
Construction-Related Services, 2014 - 2018

Demographic Group	Business Formation Rates
Black	-----
Hispanic	-----
Native American	-----
Asian/Pacific Islander	-----
Other	-----
White Women	-----
Non-White Male	4.0%
White Male	7.3%

Source: CHA calculations from the American Community Survey.

Table 5-10: Business Formation Probability Differentials for Selected Groups Relative to White Men, Construction-Related Services, 2014 - 2018

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-----
Hispanic	-----
Native American	-----
Asian/Pacific Islander	-----
Other	-----
White Women	-----

Source: CHA calculations from the American Community Survey.

Table 5-11: Wage Differentials for Selected Groups Relative to White Men Construction-Related Services, 2014 - 2018

Demographic Group	Wages Relative to White Men (% Change)
Black	-7.4%
Hispanic	-7.1%
Native American	6.3%
Asian/Pacific Islander	-15.1%
Other	-16.8%
White Women	-30.5%

Source: CHA calculations from the American Community Survey.

Table 5-12: Business Earnings Differentials for Selected Groups Relative to White Men Construction-related Services, 2014 - 2018

Demographic Group	Earnings Relative to White Men (% Change)
Black	-----
Hispanic	-----
Native American	-----

Demographic Group	Earnings Relative to White Men (% Change)
Asian/Pacific Islander	-----
Other	-----
White Women	-----

Source: CHA calculations from the American Community Survey.

4. The Goods Industry in Dallas Fort Worth Metropolitan Area

Table 5-13 indicates that White men have higher business formation rates except Asian/Pacific Islanders. Table 5-14 indicates that only one result is statistically significant (Asian/Pacific Islander). Table 5-15 indicates that statistically significant results are found for four groups (Black; Hispanic; Asian/Pacific Islanders; and White Women) and all indicate lower wages relative to White men. Table 5-16 indicates that none of the coefficients for business earnings were statistically significant.

**Table 5-13: Business Formation Rates
Goods, 2014 - 2018**

Demographic Group	Business Formation Rates
Black	1.0%
Hispanic	1.3%
Native American	-----
Asian/Pacific Islander	7.5%
Other	-----
White Women	2.8%
Non-White Male	2.1%
White Male	3.5%

Source: CHA calculations from the American Community Survey.

**Table 5-14: Business Formation Probabilities Relative to White Males
Goods, 2014 - 2018**

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-1.9%*
Hispanic	-1.3%*
Native American	-----
Asian/Pacific Islander	3.8%***
Other	-----
White Women	-0.7%

Source: CHA calculations from the American Community Survey.

*** Indicates statistical significance at the 0.001 level.

* Indicates statistical significance at the 0.05 level.

**Table 5-15: Wage Differentials for Selected Groups Relative to White Men
Goods, 2014 - 2018**

Demographic Group	Wages Relative to White Men (% Change)
Black	-36.2%***
Hispanic	-20.2%***
Native American	-25.1%
Asian/Pacific Islander	-40.2%***
Other	38.2%
White Women	-35.7%***

Source: CHA calculations from the American Community Survey.

*** Indicates statistical significance at the 0.001 level.

**Table 5-16: Business Earnings Differentials for Selected Groups Relative to White Men
Goods, 2014 - 2018**

Demographic Group	Earnings Relative to White Men (% Change)
Black	-368.0% ^{*a}
Hispanic	137.0%
Native American	-----
Asian/Pacific Islander	-134.0%
Other	-----
White Women	-3.9%

a. The proper way to interpret a coefficient that is less than -100 percent, such as the value of the coefficient for Blacks in Table 5-16, is the percentage represents the amount non-M/WBEs earn that is more than the group in question. In this case, non-M/WBE firms earn 368 percent more than Black firms.

Source: CHA calculations from the American Community Survey.
* Indicates statistical significance at the 0.05 level.

5. The Services Industry in Dallas Fort Worth Metropolitan Area

Table 5-17 indicates that White men have higher business formation rates compared to Non-Whites and White Women. Table 5-18 indicates that Non-Whites and White Women are less likely to form businesses compared to similarly situated White men and three of the coefficients are statistically significant at the 0.001 level. Table 5-19 indicates that Non-whites and White women earn less than White men. Table 5-20 indicates that business earnings for Non-whites and White women are less than White men except for Asian firms.

**Table 5-17: Business Formation Rates
Services, 2014 - 2018**

Demographic Group	Business Formation Rates
Black	1.8%
Hispanic	1.8%
Native American	-----
Asian/Pacific Islander	5.4%

Demographic Group	Business Formation Rates
Other	-----
White Women	4.2%
Non-White Male	2.9%
White Male	7.6%

Source: CHA calculations from the American Community Survey.

Table 5-18: Business Formation Probability Differentials for Selected Groups Relative to White Men, Services, 2014 - 2018

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-4.1%***
Hispanic	-2.8%***
Native American	-----
Asian/Pacific Islander	-0.7%*
Other	-----
White Women	-2.2%***

Source: CHA calculations from the American Community Survey.

*** Indicates statistical significance at the 0.001 level.

* Indicates statistical significance at the 0.05 level.

Table 5-19: Wage Differentials for Selected Groups Relative to White Men Services, 2014 - 2018

Demographic Group	Wages Relative to White Men (% Change)
Black	-33.6%***
Hispanic	-16.1%***
Native American	-34.2%***
Asian/Pacific Islander	-31.0%***
Other	-44.7%***
White Women	-30.5%***

Source: CHA calculations from the American Community Survey.

*** Indicates statistical significance at the 0.001 level.

Table 5-20: Business Earnings Differentials for Selected Groups Relative to White Men Services, 2014 - 2018

Demographic Group	Earnings Relative to White Men (% Change)
Black	-79.0%**
Hispanic	-24.9%
Native American	-----
Asian/Pacific Islander	20.8%
Other	-----
White Women	-89.8%***

Source: CHA calculations from the American Community Survey.

*** Indicates statistical significance at the 0.001 level.

** Indicates statistical significance at the 0.01 level.

6. The Information Technology Industry in the Dallas Fort Worth Metropolitan Area

In addition to the limitations due to insufficient observations mentioned in footnote 17, there were only 8 Black business observations which impacted the ability to analyze firm activity for Black firms in this industry. Table 5-21 indicates that White men have higher business formation rates compared to Non-Whites and White Women. Table 4-22 indicates that none of the coefficients were statistically significant. Table 5-23 indicates that Non-whites and White women earn less than White men and all coefficients are statistically significant. Where analyses could be made, Table 5-24 indicates that three business coefficients (Hispanic; Asian/Pacific Islanders; White Women) were not statistically significant.

Table 5-21: Business Formation Rates Information Technology, 2014 - 2018

Demographic Group	Business Formation Rates
Black	-----
Hispanic	3.0%
Native American	-----
Asian/Pacific Islander	3.8%
Other	-----

Demographic Group	Business Formation Rates
White Women	4.0%
Non-White Male	3.1%
White Male	4.9%

Source: CHA calculations from the American Community Survey.

Table 5-22: Business Formation Probability Differentials for Selected Groups Relative to White Men, Information Technology, 2014 - 2018

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-----
Hispanic	-0.9%
Native American	-----
Asian/Pacific Islander	-0.5%
Other	-----
White Women	-1.2%

Source: CHA calculations from the American Community Survey.

Table 5-23: Wage Differentials for Selected Groups Relative to White Men Information Technology, 2014 - 2018

Demographic Group	Wages Relative to White Men (% Change)
Black	-35.9%***
Hispanic	-22.4%***
Native American	-75.3%**
Asian/Pacific Islander	-17.7%***
Other	-62.5%***
White Women	-22.9%***

Source: CHA calculations from the American Community Survey.

*** Indicates statistical significance at the 0.001 level.

** Indicates statistical significance at the 0.01 level.

**Table 5-24: Business Earnings Differentials for Selected Groups Relative to White Men
Information Technology, 2014 - 2018**

Demographic Group	Earnings Relative to White Men (% Change)
Black	-----
Hispanic	-56.4%
Native American	-----
Asian/Pacific Islander	30.0%
Other	-----
White Women	-87.2%

Source: CHA calculations from the American Community Survey.

C. Disparate Treatment in the Marketplace: Evidence from the Census Bureau’s 2012 Survey of Business Owners

Every five years, the Census Bureau administers the *Survey of Business Owners* (“SBO”) to collect data on particular characteristics of businesses that report to the Internal Revenue Service receipts of \$1,000 or more.¹⁴² The 2012 SBO was released on December 15, 2015, so our analysis reflects the most current data available. The SBO collects demographic data on business owners disaggregated into the following groups:^{143, 144}

- Non-Hispanic Blacks
- Latinos
- Non-Hispanic Native Americans
- Non-Hispanic Asians
- Non-Hispanic White Women
- Non-Hispanic White Men
- Firms Equally Owned by Non-Whites and Whites

142. See <http://www.census.gov/econ/sbo/about.html> for more information on the Survey.

143. Race and gender labels reflect the categories used by the Census Bureau.

144. For expository purposes, the adjective “Non-Hispanic” will not be used in this chapter; the reader should assume that any racial group referenced does not include members of that group who identify ethnically as Latino.

- Firms Equally Owned by Men and Women
- Firms where the ownership could not be classified
- Publicly-Owned Firms

For purposes of this analysis, the first four groups were aggregated to form a Non-White category. Since our interest is the treatment of Non-White-owned firms and White Women-owned firms, the last five groups were aggregated to form one category. To ensure this aggregated group is described accurately, we label this group “not Non-White/Non-White Women”. While this label is cumbersome, it is important to be clear this group includes firms whose ownership extends beyond White men, such as firms that are not classifiable or that are publicly traded and thus have no racial ownership. In addition to the ownership demographic data, the Survey also gathers information on the sales, number of paid employees, and payroll for each reporting firm.

To examine those industry sectors in which City of Fort Worth purchases, we analyzed economy-wide SBO data on the following sectors:

- Construction
- Professional, Scientific and Technical Services
- Goods
- Other services

However, the nature of the SBO data – a sample of all businesses, not the entire universe of all businesses – required some adjustments. In particular, we had to define the sectors at the 2-digit North American Industry Classification System (“NAICS”) code level, and therefore our sector definitions do not exactly correspond to the definitions used to analyze the City’s contract data in Chapter IV, where we were able to determine sectors at the 6-digit NAICS code level. At a more detailed level, the number of firms sampled in particular demographic and sector cells may be so small that the Census Bureau does not report the information, either to avoid disclosing data on businesses that can be identified or because the small sample size generates unreliable estimates of the universe.¹⁴⁵ We therefore report 2-digit data for purposes of this analysis.

Table 5-25 presents information on which NAICS codes were used to define each sector.

145. Even with these broad sector definitions, there were many cases when the Census Bureau did not report information. In these cases, the value will be entered into the table as “s”

Table 5-25: 2-Digit NAICS Code Definition of Sector

SBO Sector Label	2-Digit NAICS Codes
Construction	23
Professional, Scientific, and Technical Services ^a	54
Goods	31,42, 44
Other Services	48, 52, 53, 56, 61, 62, 71, 72, 81

a. This sector includes (but is broader than just) construction-related services. It is impossible to narrow this category to construction-related services without losing the capacity to conduct race and gender specific analyses.

The remainder of Section C of this chapter reports the findings of the SBO analysis. For each sector, we present the data describing the sector and report the disparities within that sector.

1. All Industries

For a baseline analysis, we examined all industries in the State of Texas. Table 5-26 presents data on the percentage share that each group has of the total of each of the following six business outcomes:

- The number of all firms
- The sales and receipts of all firms
- The number of firms with employees (employer firms)
- The sales and receipts of all employer firms
- The number of paid employees
- The annual payroll of employer firms

Panel A of Table 5-26 presents data for the four basic Non-White racial groups:

- Black
- Latino
- Native American
- Asian

Panel B of Table 5-26 presents data for six types of firm ownership:

- Non-white

- White Women
- White Men
- Equally Non-Whites and Whites
- Equally women and men
- Firms that are publicly-owned or not classifiable

Categories in the second panel are mutually exclusive. Hence, minority firms that are equally owned by men and women are classified as ‘Non-White’. Firms that are equally owned by minorities and Whites and equally owned by men and women are classified as ‘Equally Non-White & and White’.¹⁴⁶

**Table 5-26: Percentage Demographic Distribution of Sales and Payroll Data
All Industries, 2012**

	Total Number of Firms (All Firms)	Sales & Receipts - All Firms (\$1,000)	Number of Firms with Paid Employees (Employer Firms)	Sales & Receipts - All Firms with Paid Employees (Employer Firms) (\$1,000)	Number of Paid Employees	Annual payroll (\$1,000)
Panel A: Distribution of Non-White Firms						
Black	8.89%	0.32%	2.36%	0.22%	0.85%	0.49%
Latino	29.17%	2.51%	12.69%	1.92%	5.25%	3.53%
Native American	0.64%	0.08%	0.54%	0.07%	0.17%	0.13%
Asian	6.46%	1.72%	10.35%	1.60%	3.29%	2.18%
Panel B: Distribution of All Firms						
Non-White	45.42%	4.74%	26.27%	3.90%	9.71%	6.48%
White Women	16.39%	2.56%	12.98%	2.31%	5.00%	4.08%
White Men	29.87%	19.83%	42.92%	19.27%	26.19%	25.64%
Equally Non-White & White	1.07%	0.37%	1.74%	0.33%	0.78%	0.55%

146. Some of the figures in Panel B may not correspond to the related figures in Panel A because of discrepancies in how the SBO reports the data.

	Total Number of Firms (All Firms)	Sales & Receipts - All Firms (\$1,000)	Number of Firms with Paid Employees (Employer Firms)	Sales & Receipts - All Firms with Paid Employees (Employer Firms) (\$1,000)	Number of Paid Employees	Annual payroll (\$1,000)
Equally Women & Men	5.71%	1.96%	9.87%	1.80%	3.40%	2.67%
Firms Not Classifiable	1.50%	70.53%	6.11%	72.38%	54.89%	60.53%
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners.

Since the central issue is the possible disparate treatment of Non-White and White Women firms, Table 5-27 re-aggregates the last four groups—White men; equally Non-White and White; equally women and men; and firms not classifiable—into one group: Not Non-White/Not White Women.¹⁴⁷ We then present the shares each group has of the six indicators of firm utilization. These data were then used to calculate three disparity ratios, presented in Table 5-28:

- Ratio of sales and receipts share for all firms over the share of total number of all firms.
- Ratio of sales and receipts share for employer firms over the share of total number of employer firms.
- Ratio of annual payroll share over the share of total number of employer firms.

For example, the disparity ratio of sales and receipts share for all firms over the share of total number of all firms for Black firms is 3.62 percent (as shown in Table 5-28). This is derived by taking the Black share of sales and receipts for all firms (0.3 percent) and dividing it by the Black share of total number of all firms (8.9 percent) that are presented in Table 5-27. If Black-owned firms earned a share of sales equal to their share of total firms, the disparity would have been 100 percent. An index less than 100 percent indicates that a given group is being utilized less than would be expected based on its availability, and courts have adopted the Equal Employment Opportunity Commission’s “80 percent” rule that a ratio less than 80 percent presents a *prima facie* case

147. Again, while a cumbersome nomenclature, it is important to remain clear that this category includes firms other than those identified as owned by White men.

of discrimination.¹⁴⁸ All disparity ratios for Non-White firms and White Women firms are below this threshold.¹⁴⁹ Examining Table 5-28, 17 of the 18 disparity ratios for Non-White firms and White Women firms are below the 80 percent threshold.

Table 5-27: Demographic Distribution of Sales and Payroll Data – Aggregated Groups
All Industries, 2012

	Total Number of Firms (All Firms)	Sales & Receipts - All Firms (\$1,000)	Number of Firms with Paid Employees (Employer Firms)	Sales & Receipts - All Firms with Paid Employees (Employer Firms) (\$1,000)	Number of Paid Employees	Annual payroll (\$1,000)
Panel A: Distribution of Non-White Firms						
Black	8.9%	0.3%	2.4%	0.2%	0.8%	0.5%
Latino	29.2%	2.5%	12.7%	1.9%	5.3%	3.5%
Native American	0.6%	0.1%	0.5%	0.1%	0.2%	0.1%
Asian	6.5%	1.7%	10.4%	1.6%	3.3%	2.2%
Panel B: Distribution of All Firms						
Non-White	45.4%	4.7%	26.3%	3.9%	9.7%	6.5%
White Women	16.4%	2.6%	13.0%	2.3%	5.0%	4.1%
Not Non-White/Not White Women	38.2%	92.7%	60.7%	93.8%	85.3%	89.4%
All Firms	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: CHA calculations from Survey of Business Owners.

148. 29 C.F.R. § 1607.4(D) (“A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the highest rate will generally be regarded by the Federal enforcement agencies as evidence of adverse impact, while a greater than four-fifths rate will generally not be regarded by Federal enforcement agencies as evidence of adverse impact.”).

149. Because the data in the subsequent tables are presented for descriptive purposes, significance tests on these results are not conducted.

**Table 5-28: Disparity Ratios of Firm Utilization Measures
All Industries, 2012**

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	3.62%	9.17%	57.98%
Latino	8.58%	15.12%	67.30%
Native American	13.14%	13.30%	76.33%
Asian	26.66%	15.40%	66.34%
Panel B: Disparity Ratios for All Firms			
Non-Whites	10.43%	14.83%	66.76%
White Women	15.63%	17.76%	81.50%
Not Non-White/ Not White Women	242.88%	154.50%	104.87%
All Firms	100.0%	100.0%	100.0%

Source: CHA calculations from Survey of Business Owners.

This same approach was used to examine the construction, professional, scientific and technical services, goods, and other services sectors. The following are summaries of the results of the disparity analyses.

2. Construction

Of the 16 disparity ratios for Non-White firms and White Women firms presented in Table 5-29, 12 fall under the 80 percent threshold.

**Table 5-29: Disparity Ratios – Aggregated Groups
Construction, 2012**

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	18.62%	s	s
Latino	19.51%	36.60%	67.00%

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Native American	36.34%	32.06%	80.14%
Asian	47.90%	46.60%	90.44%
Panel B: Disparity Ratios for All Firms			
Non-White	20.48%	38.20%	69.89%
White Women	92.45%	49.52%	89.15%
Not Non-White/Not White Women	207.49%	123.24%	104.51%
All Firms	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners.

3. Construction-Related Services

Of the 18 disparity ratios for Non-White firms and White Women firms presented in Table 5-30, 12 are under the 80 percent threshold.

**Table 5-30: Disparity Ratios – Aggregated Groups
Professional, Scientific, and Technical Services, 2012**

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	13.21%	26.05%	170.60%
Latino	24.81%	35.69%	179.04%
Native American	27.69%	24.04%	164.27%
Asian	49.37%	36.87%	223.08%
Panel B: Disparity Ratios for All Firms			
Non-White	27.84%	34.65%	193.44%

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
White Women	26.84%	30.53%	173.42%
Not Non-White/Not White Women	173.61%	135.71%	93.94%
All Firms	100.0%	100.0%	100.0%

Source: CHA calculations from Survey of Business Owners.

4. Goods

Of the 18 disparity ratios for Non-White firms and White Women firms presented in Table 5-31, 15 fall under the 80 percent threshold.

**Table 5-31: Disparity Ratios – Aggregated Groups
Goods, 2012**

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	1.83%	7.55%	82.29%
Latino	5.77%	11.74%	78.42%
Native American	9.02%	12.08%	102.45%
Asian	18.44%	9.97%	67.37%
Panel B: Disparity Ratios for All Firms			
Non-White	7.96%	10.77%	73.97%
White Women	9.11%	14.51%	93.05%
Not Non-White/Not White Women	246.36%	160.74%	102.43%
All Firms	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners.

5. Services

Of the 16 disparity ratios for Non-White firms and White Women firms presented in Table 5-32, 16 fall under the 80 percent threshold.

**Table 5-32: Disparity Ratios – Aggregated Groups
Services, 2012**

	Ratio of Sales to Number of Firms (All Firms)	Ratio of Sales to Number of Firms (Employer Firms)	Ratio of Payroll to Number of Employer Firms
Panel A: Disparity Ratios for Non-White Firms			
Black	8.2%	18.1%	s
Latino	16.7%	25.8%	64.3%
Native American	22.8%	22.6%	s
Asian	40.8%	23.6%	63.1%
Panel B: Disparity Ratios for All Firms			
Non-White	18.6%	24.2%	63.6%
White Women	24.7%	26.2%	72.9%
Not Non-White/Not White Women	261.6%	157.1%	108.9%
All Firms	100.0%	100.0%	100.0%

Source: CHA calculations from Survey of Business Owners.

D. Evidence of Disparities in Access to Business Capital

Capital is the lifeblood of any business. As presented in Chapter VI, participants in the anecdotal data collection universally agreed to this fundamental fact. The interviews with business owners conducted as part of this Study confirmed that small firms, especially minority- and women-owned firms, had difficulties obtaining needed working capital to perform on the City’s contracts and subcontracts, as well as expand the capacities of their firms. As discussed above, discrimination may even prevent firms from forming in the first place.

There is an extensive body of scholarly work on the relationship between personal wealth and successful entrepreneurship. There is a general consensus that disparities in personal wealth translate into disparities in business creation and ownership.¹⁵⁰

The Federal Reserve Board and the U.S. Small Business Administration have conducted surveys of discrimination in the small business credit market for 1993, 1998 and 2003. These Surveys of Small Business Finances (“SSBF”) are based on a large representative sample of firms with fewer than 500 employees. The main finding from these Surveys is that MBEs experience higher loan denial probabilities and pay higher interest rates than white-owned businesses, even after controlling for differences in credit worthiness and other factors. Blacks, Hispanics and Asians were more likely to be denied credit than Whites, even after controlling for firm characteristics like credit history, credit score and wealth. Blacks and Hispanics were also more likely to pay higher interest rates on the loans they did receive.¹⁵¹

A recent report to the U.S. Department of Commerce summarizes these Surveys, results from the Kauffman Firm Survey,¹⁵² data from the U.S. Small Business Administration’s Certified Development Company/504 Guaranteed Loan Program¹⁵³ and additional extensive research on the effects of discrimination on opportunities for MBEs. The most comprehensive report of its kind, “Disparities in Capital Access Between Minority and Non-Minority Owned Businesses: The Troubling Reality of Capital Limitations Faced by MBEs”, found that

Low levels of wealth and liquidity constraints create a substantial barrier to entry for minority entrepreneurs because the owner’s wealth can be invested directly in the business, used as collateral to obtain business loans or use to acquire other businesses.... [T]he largest single actor explaining racial disparities in business creation rates are differences in asset levels.”¹⁵⁴

Some of the key findings of the Report include:

- Minority-owned firms are less likely to receive loans than non-minority owned firms regardless of firm size. According to an analysis of data from the *Survey of Small Business Finances*, for firms with gross receipts over \$500,000, 52 percent of non-minority owned firms received loans compared to 41 percent of minority-owned firms.

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150. See, e.g., Evans, David S. and Jovanovic, Boyan, “An Estimated Model of Entrepreneurial Choice under Liquidity Constraints,” *Journal of Political Economy*, (1989); Evans, David S. and Leighton, Linda “Some empirical aspects of entrepreneurship,” *American Economic Review*, (1989).
151. See Blanchflower, D. G., Levine. P. and Zimmerman, D., “Discrimination In The Small Business Credit Market,” *Review of Economics and Statistics*, (2003); Cavalluzzo, K. S. and Cavalluzzo, L. C. (“Market structure and discrimination, the case of small businesses,” *Journal of Money, Credit, and Banking*, (1998).
152. http://www.kauffman.org/~media/kauffman_org/research%20reports%20and%20covers/2013/06/kauffmanfirmsurvey2013.pdf.
153. <http://www.sba.gov/category/navigation-structure/loans-grants/small-business-loans/sba-loan-programs/real-estate-and-eq>.
154. Fairlie, R. W. and Robb, A., “Disparities in Capital Access Between Minority and Non-Minority Owned Businesses: The Troubling Reality of Capital Limitations Faced by MBEs,” U.S. Department of Commerce, Minority Business Development Agency, 2010, pp. 22-23.

- When minority-owned firms do receive financing, it is for less money and at a higher interest rate than non-minority owned firms regardless of the size of the firm. Minority-owned firms paid an average of 7.8 percent in interest rates for loans compared to 6.4 percent for non-minority owned firms. Among firms with gross receipts under \$500,000, minority-owned firms paid an average of 9.1 percent in interest rates compared to 6.9 percent for non-minority owned firms.
- Minority owned firms are more likely to be denied loans. Among firms with gross receipts under \$500,000, loan denial rates for minority firms were about three times higher, at 42 percent, compared to those of non-minority owned firm, at 16 percent. For high sales firms, the rates of loan denial were almost twice as high for MBEs as for non-MBEs.
- MBEs pay higher interest rates for business loans. For all firms, MBEs paid 7.8 percent on average for loans compared with 6.4 percent for non-MBEs. The difference was smaller, but still high, between MBEs and non-MBEs with high sales.
- Minority-owned firms receive smaller equity investments than non-minority owned firms even when controlling for detailed business and owner characteristics. The differences are large and statistically significant. The average amount of new equity investments in minority-owned firms receiving equity is 43 percent of the average of new equity investments in non-minority owned firms. The differences were even larger for loans received by high sales firms. Yet, venture capital funds focusing on investing in minority firms provide returns that are comparable to mainstream venture capital firms.¹⁵⁵
- Disparities in total investments in minority-owned firms compared to those in non-minority owned firms grew after the first year of business operations. According to the analysis of the data from the Kauffman Firm Survey, minority-owned firms' investments into their firms were about 18 percent lower in the first year of operations compared to those of non-minority owned firms. This disparity grew in the subsequent three years of operations, where minorities' investments into their firms were about 36 percent lower compared to those of non-minority owned firms.
- Minority entrepreneurs face challenges (including lower family wealth and difficulty penetrating financial markets and networks) directly related to race that limit their ability to secure financing for their businesses.

These findings are consistent with those of the 2012 study. Examining the *Survey of Small Business Finances* (“SSBF”), conducted by the Federal Reserve Board and the U.S. Small Business Administration from 1999-2003¹⁵⁶, the study found that

155. See Bates, T., “Venture Capital Investment in Minority Business,” *Journal of Money Credit and Banking* 40, 2-3 (2008).

MBEs experience significant barriers compared to similar non-M/WBEs. When minority-owned firms did apply for a loan, their loan requests were substantially more likely to be denied than non-minorities, even after accounting for differences such as firm size and credit history. Loan denial rate ranged from 8 to 24 percentage points higher than for non-minority male-owned small businesses. When minority-owned firms did receive a loan, they were obligated to pay higher interest rates on the loans than comparable non-minority owned firms. These results strongly suggest that MBEs do not enjoy full and fair access to the credit necessary to perform on the City's prime contracts and associated subcontractors.

E. Evidence of Disparities in Access to Human Capital

There is a strong intergenerational correlation with business ownership. The probability of self-employment is significantly higher among the children of the self-employed. This was evident in the large number of non-M/WBEs in our interview groups who were second or even higher generation firms doing business for the market area. This disadvantages minorities, whose earlier generations were denied business ownership through either *de jure* segregation or *de facto* exclusion.

There is evidence that current racial patterns of self-employment are in part determined by racial patterns of self-employment in the previous generation.¹⁵⁷ Black men have been found to face a “triple disadvantage”; they are less likely than White men to:

- Have self-employed fathers;
- Become self-employed if their fathers were not self-employed; and
- To follow their fathers into self-employment.¹⁵⁸

Intergenerational links are also critical to the success of the businesses that do form.¹⁵⁹ Working in a family business leads to more successful firms by new owners. One study found that only 12.6 percent of Black business owners had prior work experiences in a family business as compared to 23.3 percent of White business owners.¹⁶⁰ This creates a cycle of low rates of minority ownership and worse

156. Fairlie, R.W. and Robb, A., *Race and Entrepreneurial Success: Black-, Asian- and White-Owned Businesses in the United States*, (Cambridge: MIT Press, 2008).

157. Fairlie, R.W., “The Absence of the African-American Owned Business, An Analysis of the Dynamics of Self-Employment,” *Journal of Labor Economics*, (1999).

158. Hout, M. and Rosen, H. S., “Self-employment, Family Background, and Race,” *Journal of Human Resources* 35, no.4 (2000).

159. Fairlie, R.W. and Robb, A., “Why are black-owned businesses less successful than White-owned businesses? The role of families, inheritances, and business human capital,” *Journal of Labor Economics*, (2007).

160. *Id.*

outcomes being passed from one generation to the next, with the corresponding perpetuation of advantages to White-owned firms.

Similarly, unequal access to business networks reinforces exclusionary patterns. The composition and size of business networks are associated with self-employment rates.¹⁶¹ The U.S. Department of Commerce has reported that the ability to form strategic alliances with other firms is important for success.¹⁶² M/WBEs in our interviews reported that they felt excluded from the networks that help to create success in the highway construction industry.

161. Allen, W. D., "Social Networks and Self-Employment," *Journal of Socio-Economics* 29, no.5 (2000).

162. Increasing MBE Competitiveness through strategic Alliances (Minority Business Development Agency, 2008).

VI. QUALITATIVE EVIDENCE OF RACE AND GENDER BARRIERS IN THE CITY OF FORT WORTH'S MARKET

In addition to quantitative data, a disparity study should further explore anecdotal evidence of experiences with discrimination in contracting opportunities and Fort Worth's business opportunity programs. This evidence is relevant to the question of whether observed statistical disparities in its locally funded contracts are due to discrimination and not to some other non-discriminatory cause or causes, as well as the likely efficacy of any race- and gender-neutral remedies employed by Fort Worth for all its contracting opportunities. As discussed in Chapter II, this type of anecdotal data has been held by the courts to be relevant and probative of whether the City continues to have a need to use narrowly tailored M/WBE contract goals to remedy the effects of past and current discrimination and create a level playing field for contract opportunities for all firms.

The Supreme Court has held that anecdotal evidence can be persuasive because it "brought the cold [statistics] convincingly to life."¹⁶³ Evidence about discriminatory practices engaged in by prime contractors, agency personnel, and other actors relevant to business opportunities has been found relevant regarding barriers both to minority firms' business formation and to their success on governmental projects.¹⁶⁴ While anecdotal evidence is insufficient standing alone, "[p]ersonal accounts of actual discrimination or the effects of discriminatory practices may, however, vividly complement empirical evidence. Moreover, anecdotal evidence of a [government's] institutional practices that exacerbate discriminatory market conditions are [sic] often particularly probative."¹⁶⁵ "[W]e do not set out a categorical rule that every case must rise or fall entirely on the sufficiency of the numbers. To the contrary, anecdotal evidence might make the pivotal difference in some cases; indeed, in an exceptional case, we do not rule out the possibility that evidence not reinforced by statistical evidence, as such, will be enough."¹⁶⁶

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

164. *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1168-1172 (10th Cir. 2000), cert. granted, 532 U.S. 941, then dismissed as improvidently granted, 534 U.S. 103 (2001).

165. *Concrete Works of Colorado, Inc. v. City and County of Denver*, 36 F.3d 1513, 1120, 1530 (10th Cir. 1994).

There is no requirement that anecdotal testimony be “verified” or corroborated, as befits the role of evidence in legislative decision-making, as opposed to judicial proceedings. “Plaintiff offers no rationale as to why a fact finder could not rely on the State’s ‘unverified’ anecdotal data. Indeed, a fact finder could very well conclude that anecdotal evidence need not—indeed cannot—be verified because it ‘is nothing more than a witness’ narrative of an incident told from the witness’ perspective and including the witness’ perception.”¹⁶⁷ Likewise, the Tenth Circuit held that “Denver was not required to present corroborating evidence and [plaintiff] was free to present its own witnesses to either refute the incidents described by Denver’s witnesses or to relate their own perceptions on discrimination in the Denver construction industry.”¹⁶⁸

To explore this type of anecdotal evidence of possible discrimination against minorities and women in the City’s geographic and industry markets and the effectiveness of its current race-conscious and race-neutral measures, we conducted business owner and stakeholder interviews, totaling eighty participants. We met with a broad cross section of business owners from the City’s geographic and industry markets. Firms ranged in size from large national businesses to established family-owned firms to new start-ups. We sought to explore their experiences in seeking and performing public and private sector prime contracts and subcontracts with Fort Worth, other government agencies, and in the private sector. We also elicited recommendations for improvements to Fort Worth’s BDE Program as discussed in Chapter III.

Many minority and women owners reported that while some progress has been made in integrating their firms into public and private sector contracting opportunities through race- and gender-conscious contracting programs, significant barriers remain. Race- and gender-neutral approaches alone were described as unlikely to ensure a level playing field for City contract opportunities.

A. Business Owner Interviews

The following are summaries of the issues discussed. Quotations are indented and may have been shortened for readability. The statements are representative of the views expressed over the many sessions by numerous participants.

Many minority and female owners reported that they still suffer from biased perceptions and stereotypes about their competency and professionalism. While sometimes subtle,¹⁶⁹ these biases color all aspects of their attempts to obtain contracts and to be treated equally in performing contract work.

166. *Engineering Contractors Association of South Florida, Inc. v. Metropolitan Dade County*, 122 F.3d 895, 926 (11th Cir. 1997).

167. *H.B. Rowe Co., Inc. v. Tippett*, 615 F.3d 233, 249 (4th Cir. 2010).

168. *Concrete Works*, 321 F.3d at 989.

169. *See, e.g.*, <http://www.sciencedirect.com/science/article/pii/S0191308509000239>.

It's still subtleties that you can't really get your hand on because there is no sign on there [saying minorities are not welcome].

I know [the project manager for a large general contractor] well, years and years of being here, I can still say I had push backs [as a Black woman], because I had to convince a senior executive as to who I am in the business and that I can do the job and in the end I ended up taking over an excavation job because they have problems. But yet, I was not capable of taking my full contract.

I'm not going to be belittled by nobody because I know what I can do, I know what I bring to the table, I know how I perform. But to belittle a company because they're minority-owned, I think it's disgusting.

Critical business and professional networks remain closed to many minority and women entrepreneurs.

There's this systemic nature of doing business with people you know. And we all like to do business with people we know. We know that they'll come through. They'll be on time. They'll be under budget... [But] the systemic aspect of familiarity for others sometimes breeds contempt for the person trying to get in the door.

The days of racism where it said keep out or whatever, those were easier to deal with than you are right now. Sit in the lobby of some of these big companies and somebody of color comes and asks for something and they're pleasant. "Good morning. How are you doing? You can look on the website to find this." And then you see somebody who's not of color, and I've seen this happen a lot of times, I'm not saying every time, but I've seen a lot of times, "Oh, you need that link. Oh, let me show you right here. Here's the link and this is how you get it. You know, by the way, get this card here because Bobby really works on the links and in fact, here's the cell phone number."

Breaking into the network of Fort Worth vendors was especially difficult.

I've been raised in Fort Worth my whole life and so it's still a very much a good old boys club here in Fort Worth. I spend 90 percent of my time in Dallas. And I live in Fort Worth.

I've been in Fort Worth for 31 years and I'm still trying to break into Fort Worth.

Even though you are born, raised, go to Dunbar High School and whatever else ... you're still looked at the same way. You still do not have the capabilities to stand at the top of the line with the good old boys.

For those of us that are from Fort Worth, we know that it is very hard if you are not from Fort Worth to break into the business. That's not just construction. I mean, this is just across the board. And so, Fort Worth, for good or bad, has always prided itself on being this very relational town. It's still a city where people ask you first, not what college you went to, but what high school you went to. And that's just what Fort Worth is... Typically, if you're a Dallas firm, unless you have a long history here, unless you've opened up an office, spent time here, built some relationships, you're just not going to get the work and it just doesn't flow to you.... That hurts us from a standpoint of our small businesses because we almost kind of lock ourselves into this bubble. And so, if we don't have MBEs that are filling certain NAICS codes and then not here in the city, how do you get them here if they come here and they can't build relationships? How do you foster that environment? So, I think again, that's an issue that we have to deal with from the community standpoint. We have to be more open to folks that were not born here, haven't been raised here, but have come here and are looking for opportunities and they need to be able to get their foot in the door.

I'm a lifelong Fort Worth resident and taxpayer and it's very disheartening that the City of Dallas has actually been a lot easier as a small minority business. There are certain aspects of the good old boys' club [you see] attending some of the pre-bids. You do see a lot of kind of favoritism and partiality to the contractors that are there and some of the City officials.

Many women business owners had experienced sexism and gender bias in the business world that impedes their ability to flourish.

I'm a woman in a man's world.... I started my business 23 years ago, so it was even worse than it is now.... To promote a woman's perspective too, just being the only owner of the firm, that has its challenges.

I haven't worked with the City of Fort Worth in at least 10 years, on purpose. Because I got tired of having to prove myself.

Why can't I be treated as professional as anybody else walking in the room? Why is it automatically assumed, as the only woman, black woman in there, "Oh, she must be the maid. She must be the one that's waiting on us."

My industry it is extremely male dominant.... They say, " Oh, there's a girl, there's a woman. What is she here for? Who does she work for?... That's [name]. Oh, she owns her own company. She's a little bitty

company. She's nothing to worry about." Well, I'm going to be silent and deadly and they're going to watch because I'm coming.

The emphasis will be on the fact that I'm a woman in construction.

They're amazed when I show up on a project. They're like, "Why are you here?"

I can't afford for the argument all the time, I can't afford for the proving all the time. I'm trying to make money.

As women, we have had to prove ourselves in the marketplace. It doesn't matter if we're in construction or whatever field we're in.... The biggest issue I run into is that I hire a lot of contractors, and I deal with male ego and males.

He's an older gentleman but he said, "You've got to bat your eyelashes and say, 'I'll never catch up to you. We're just trying to do work with you.'"

I could tell a contractor something that needed to be changed or done, but they wouldn't take me seriously until a male would do that. And then, even once I started my own company, you have to go in and you have to be confident and aggressive. And even for the most part it's like, "Oh, well can you send me those notes? Can you send me this message?"

I do have my steel toe boots and all my safety gear in my car. I am not just the face of my business. I am actually out there doing the work and performing it. So, for a while I did get that, kind of that pre-judgment, until I got to know some of the contractors and some of the subs realized, Oh okay. And it's like, yeah, I carry a tape measure in my purse and a lot of times the guys don't even have one, it's just kind of doing small things like that it is, you do get that judgment.

They don't expect me to be able to open up the plans and go here and go there.

They still see women as a support system. They do not see us as business people. We are stepping out, and we are, women are coming on. Men, I hate to put it, y'all better get ready because the women are in the labor force, they're coming hard, and they're coming fast.

Some women reported that once they had proven themselves, sexist biases and assumptions were overcome.

I go out there and I work alongside them. I gain their respect, and then once they know that I do know what I'm doing, they go, "Oh, she does know what she's doing."

It's more like a challenge for us because we have to continually prove ourselves. Once you've proven yourself, it's like floating through, water turned on, on a faucet and you're easy, but you have to fight for the proving of yourself.

A lot of men do respect us, and they go, "You know what? I'll do work for you." I have lots of guys that call me and go, "Hey, when is the next project we're going to do together? We really worked good together. We know you're going to pay us. We know you're going to supply what we need there. You know when we say, 'We need this,' you know exactly what we need and you go get it." I think it's just a matter of how you present yourself to the public, and the people you work with. Once they get to know that you deliver, then they're going to want to do business with you.

One woman was unconcerned about gender issues.

I have some customers who absolutely only want to talk to me and that's it. But then I have some who are more, they want to talk to one of my guys and that's fine with me. I don't have a problem with it as long as they pay their bills on time and they're not discriminating against anybody in my company.

An older woman who has succeeded had advice for younger women entering the construction world.

If you can't stand a little bit of that when you go on a job site because they're staring or whistling or whatever, then maybe you shouldn't be on the job site.... That's not going to stop. You just got to toughen up and you just got to decide if you're going to deal with it or not. And if you refuse or don't want to do it, then don't do it.

Unequal access to business credit was cited as another obstacle to M/WBEs obtaining City work.

People of color do not get the same credit even if their financials and credit scores are the same.... [A white man has] got a little bit more credit than you did. And then there was a slowdown in paid invoices, [he's] a big GC and he floats it because he's got a little more credit. And then people turn around, "Hey, that guy's a good business. Joe Man Black over here, Hispanic, he doesn't know how to manage his business." All he did was access his credit line. And if he would've had his credit line, he could do it, too. It's like he ain't stupid. If he had a

credit line, he'd access it when he needs it.... So then, [non-M/WBEs] look like they're better business people, not because they're better business people, but because people are carrying them.

To overcome any race- and/or gender-based barriers, the vast majority of minority and women owners and stakeholder representatives were adamant that contract goals are necessary to ensure they have full and fair opportunities to compete.

If it wasn't for that requirement, that MWB requirement, most of the businesses would probably have a very difficult time staying in business and my business, probably 80 percent of it [comes] just from these types of governmental projects that come along and it's no way that these primes would work with us ... on projects that did not have an MWB requirement.

[M/WBE goals] are working, in my opinion, and it's been fascinating how many primes and also project leads have just kind of come into our office and said we're not looking to meet our goals, we're looking to exceed them.

As a result of having an M/WBE program, then [prime vendors are] encouraged to bring on and give us opportunities, which they have done.

If the program went away, what would happen? You would lose small businesses. One, if you don't have relationships, people do business with who they know. If we don't have a program that says that there has to be utilization, participation levels, whatever that is, DBE goals MBE goals, they won't use them.

I don't know who's saying that we don't need goals and all that other stuff. I don't know what they're smoking, but it ain't business stuff.

If I didn't have the DBE certification, we couldn't do business at the airport. If I didn't have the WBE certification, we couldn't do business with somebody else. So, the DBE certification got us into the City of Dallas. It's all of those together that have built my business. I know they're a hassle ... but it really opened up a lot of opportunities for us.

The [City] work stopped as a result [of dropping Hispanic firms from the program]. It was not going to be helpful to [the prime proposer] to bring on my firm, because they wouldn't get any points in the grading of the proposals. So, therefore, I have not been able to do any work at all since.

The exclusion of White women from the City's program based on the recommendations of an earlier disparity study had eliminated their opportunities to work on City projects.

If the City of Fort Worth doesn't require me, then why do I need to be a part of it?

As a WBE, that's another reason why I never got my certifications was because Fort Worth didn't recognize it. So, I was like, " Yeah, why don't you even do that?" So, it was four years ago, I did do all of my certifications and I have had much more success in Dallas.

B. Conclusion

Consistent with quantitative evidence reported in this study, anecdotal interview information suggests that minorities and women continue to suffer discriminatory barriers to full and fair access to City of Fort Worth contracts and subcontracts. While not definitive proof that the City should continue its race- and gender-conscious measures to reduce these impediments, M/WBEs' experiences are the type of evidence that, especially when considered alongside the study's statistical proof, the courts have found to be probative of whether Fort Worth may use narrowly tailored M/WBE contract goals to address discriminatory barriers. This element of the "strong basis in evidence" necessary for race-conscious relief also provides guidance about what types of narrowly tailored remedies will level the playing field for City-funded opportunities.

VII. RECOMMENDATIONS FOR THE CITY OF FORT WORTH'S BUSINESS DIVERSITY PROGRAM

The quantitative and qualitative data presented in this Study provide a thorough examination of the evidence regarding the experiences of minority- and women-owned firms operating in the City of Fort Worth's geographic and procurement markets. As required by strict scrutiny¹⁷⁰, we analyzed evidence of such firms' utilization by the City as measured by dollars spent. We also examined business owners' experiences in obtaining City contracts and associated subcontracts, and opportunities in the private sector. We gathered statistical and anecdotal data to provide the evidence necessary to determine whether there is a strong basis in evidence that barriers to full and equal contracting opportunities exist on the basis of race or gender in the City's market area that circumscribe City contract opportunities, and if so, what narrowly tailored remedies are appropriate.

The Study results support the City's continuing compelling interest in implementing its race- and gender-conscious Business Diversity Enterprise ("BDE") program. The statistical data and the anecdotal testimony provide a sufficient basis for the continued use of narrowly tailored remedial race- and gender-based measures to ensure full and fair access by all firms to City prime contracting and associated subcontracting opportunities.

We therefore suggest enhancements to the City's existing measures and new initiatives to increase opportunities for Minority- and Women-Owned Business Enterprises ("M/WBEs") and other small businesses. The following recommendations seek to provide guidance to ensure the programs conform to strict scrutiny and national best practices for M/WBE programs.

170. See Chapter II.

A. Enhance Race- and Gender-Neutral Measures

1. Implement Additional Features of the City's Electronic Contracting Data Collection and Monitoring System

Fort Worth has recently implemented the B2Gnow electronic data collection and monitoring system for its BDE program. Much of the required data was collected in the system. The City worked very hard at the beginning to clean up the data and fill in as much missing data as possible. We therefore urge the City to ensure that new data entry is complete to both support program administration and reduce the amount of manual manipulation for future studies. Data to be collected should include:

- Prime vendor information: contact person with email; race and gender of the firm's owner(s); and industry classification codes (preferably, North American Industry Classification System codes); and amounts paid, including any change orders.
- Non-certified subcontractor information: firm name, address with zip code, work description; race and gender of the owner(s); industry classification code;
- and amounts paid.

In addition to full data collection, we suggest the City implement the contract/project-specific goal setting module available as part of the current system to set narrowly tailored goals using the data from this Study as the starting point. This will not only tie the program's implementation to its evidentiary basis but also increase consistency and transparency of the contract goal setting process.

Another enhancement of the system would be to allow prime vendors to submit verified subcontractor utilization plans online. This should reduce the time for review of plans and the burdens of record keeping.

2. Increase Outreach to M/WBEs and Small Firms

The City currently participates in vendor fairs and other outreach events hosted by local "sister" agencies. While M/WBEs and small firms found these to be somewhat useful, several business owners suggested more meetings that focused on specific City projects or for specific industries, such as engineering services.

3. Increase Contract “Unbundling”

The size and complexity of many of the City’s contracts are major impediments to M/WBEs and other small firms in obtaining work as prime contractors and as subcontractors. Reviewing specific procurement needs through the lens of small businesses can lead to reduced barriers across many City departments. “Unbundling” contracts into smaller segments was endorsed by many firm owners as one method to provide fair access to City projects. In conjunction with reduced insurance and bonding requirements where possible, unbundled contracts would permit smaller firms to move from quoting solely as subcontractors to bidding as prime contractors. Unbundled contracts would also enhance their subcontracting opportunities. Unbundling must be conducted, however, within the constraints of the need to ensure efficiency and limit costs to taxpayers, as well as any state law requirements.

4. Review Requirements

Another race- and gender-neutral approach to reduce barriers would be to accept equivalent experience when evaluating bids or proposals that are not awarded solely on the basis of price. This can include an individual’s experience at an earlier firm, such as an owner who has transitioned from employee to entrepreneur, or work performed on projects similar though not identical to the services sought in the City’s solicitation.

Further, the City should examine its current prequalification policies to review the criteria so that they are no more restrictive or burdensome than is absolutely necessary. It is also important to ensure that the BDE Office is aware of those requirements so that certified firms will not miss out on opportunities because of a lack of coordination between City departments.

5. Provide Training to City Staff

Fort Worth has evinced a strong commitment to diversity and inclusion. The recent installation of a Director for Diversity and Inclusion is an important step towards further institutionalizing these values. The commissioning of this Study is another such advance. To actualize these commitments, it will be valuable to provide training to City employees with responsibilities for contracting and procurement and vendor interface on new initiatives. It is also an opportunity to again stress the importance of diversity and inclusion and ensure that the program is “owned” by all departments, not just the Office of Business Diversity.

For example, the City’s current policy is to solicit at least two certified firms for informal solicitations, *i.e.*, purchase orders under \$50,000.00. However, some

concerns were raised that buyers are not always adhering to this directive. Training should stress these and other inclusion policies to ensure understanding and compliance.

In addition, the City should consider providing unconscious or implicit bias training for all City staff.¹⁷¹ “Implicit bias” refers to attitudes and stereotypes that influence judgment, decision-making, and behavior in ways that are outside of conscious awareness and/or control. As discussed in Chapter VI, many minority and women business owners encounter bias and negative perceptions throughout the business world, including government agencies. Such training should raise awareness and understanding to work toward making the City of Fort Worth a model of diversity and inclusion.

B. Revise the Business Diversity Enterprise Program

The Study’s results support the determination that the City has a strong basis in evidence to implement race- and gender-conscious remedies. The record— both quantitative and qualitative— establishes that M/WBEs in the City’s market area continue to experience significant disparities in their access to City contracts and private sector opportunities and to those factors necessary for business success. These findings support the inference that discrimination remains a barrier to full and fair opportunities for all firms. Even with the use of limited contract goals for only certain groups (based on the prior Disparity Study), M/WBEs as a group have not reached parity on City-funded jobs. The results for Black-owned and Native-American-owned firms are particularly stark.¹⁷²

Further, the economy-wide analyses in Chapter V reveal that in the overall DFW Metroplex economy, where contracting equity programs are rare as a portion of total economic activity, M/WBEs experience very large and significant disparities to full and fair chances to entrepreneurial success. For example, minorities and women form businesses at rates well below comparable white men and earn significantly less from the businesses they do form. Similarly, minority- and women-owned firms experience large disparities in the ratios of their sales and their payrolls relative to the number of their firms. Further, the anecdotal reports of inadequate access to information, biased perceptions, entrenched and closed networks, lack of access to capital and bonding, restrictive experience requirements, and other impediments on the basis of, or exacerbated by, race and gender would impede M/WBEs’ success on City contracts without remedial intervention.

Overall, the picture that emerges shows the continuing effects of discrimination in creating barriers to the full and fair participation of all firms across all product mar-

171. <https://implicit.harvard.edu>.

172. Table 4-9, Disparity Ratios by Demographic Group.

kets in the City’s relevant geographic market area. While the City’s program has been successful in overcoming these barriers for some members of groups in some industries¹⁷³, the experiences of most M/WBEs in most industries, as well as outside of contracting affirmative action programs, strongly suggests that flexible contract goals are still warranted. Without remedial intervention to level the playing field, Fort Worth might function as a “passive participant” in the “market failure” of discrimination.

We therefore recommend the continued implementation of a race- and gender-conscious program and the inclusion of all groups for credit towards meeting contract goals in all industries.

1. Use the Study to Set the M/WBE Annual Goal

The weighted availability estimates in Chapter IV should be the basis for consideration of overall, annual spending targets for City funds.¹⁷⁴ We found the availability of M/WBEs to be 25.4 percent.

2. Use the Study to Set Narrowly Tailored Contract Specific Goals

As discussed in Chapter II, the City’s constitutional responsibility is to ensure that goals are narrowly tailored to the specifics of the project. We therefore urge the City to jettison the current approach of a patchwork of broad industry or category goals (*i.e.*, construction, professional services, good and services and architectural and engineering services) in favor of a constitutionally defensible, narrowly tailored approach to contract goal setting. Not only are these generic categories somewhat arbitrary (is a landscaping subcontract to be performed as part of a building project “services” or “construction”?) but also by not reviewing the actual scopes of work, the goal may well be inapposite to the actual work performed. Finally, it will obviate the need to consider whether to grant “waivers” of overall goals before the contract is advertised.

Further, goals should be set not only for subcontracting tasks but for the entire scope of work of the project. This is the well accepted, national best practice. To do otherwise is to remove the dollars expected to be earned by the prime bidder from the reach of the remedial program. Not only is there no legal requirement to constrict the program in this manner but also it is prime work that is the most difficult for M/WBEs to achieve. A “subcontracting” only contract goal locks in the very barriers sought to be overcome because it forces M/WBE prime contractors to subcontract out work they could self-perform

173. Table 4-10, Hispanic Versus Non-M/WBE Outcomes in NAICS Code 541330 (Engineering Services); Table 4-11, Asian Versus Non-M/WBE Outcomes in NAICS Code 237310 (Highway, Street, and Bridge Construction); and Table 4-12, White Women Versus Non-M/WBE Outcomes in NAICS Code 541330 (Engineering Services).

174. Table 4-8, Aggregated Weighted Availability for the City of Fort Worth’s Contracts.

and thereby grow their skills and revenues. This will also simplify and bolster the legality of the administration of the program, by eliminating extra points that are sometimes given to certified firms that depend on the form of their contractual relationships with other parties (*e.g.*, joint venture agreements versus subcontracting agreements).

As discussed in Chapter II, the City's constitutional and regulatory responsibility is to ensure that its implementation of the program is narrowly tailored to its geographic and procurement marketplace. The highly detailed availability estimates in Chapter IV¹⁷⁵ can serve as the starting point for narrowly tailored contract goal setting that reflects the percentage of available M/WBEs to perform the specific scopes of work of the contract as a percentage of the total pool of available firms. Several prime vendors, especially consulting firms, questioned how the City sets its contract goals and reported that the City's goals sometimes do not reflect the actual skills of available firms or the work that can reasonably be subcontracted. This approach provides additional transparency and accountability.

We therefore suggest that the City weigh the estimated scopes of the contract by the detailed availability estimates in this Report, and then adjust the result based on geography and current market conditions (for example, the volume of work currently underway in the market, the entrance of newly certified firms, specialized nature of the project, etc.).

The B2GNow electronic data collection and monitoring system contains a contract goal setting module developed to utilize the study data as the starting point. We have worked extensively with this firm to develop a simple, defensible methodology to use the study data. The unweighted availability estimates should be weighted by the expected scopes of the particular contract, including the prime vendor's anticipated self-performance. The results will be the first step in setting the contract goal. The City should then review the result in light of other factors, such as the entry of new firms into the program, other current Houston area projects that may impact availability, progress towards meeting the annual goals, any unique aspects to the scopes, or other relevant factors. Any adjustment to the calculated goal should be fully documented. Written policies explaining the contract goal setting steps should be disseminated so that all contracting actors understand the methodology. By employing the B2GNow system as the starting point for goal setting, and fully documenting any adjustments, bidders will gain confidence that the goals are based on demonstrable evidence and that the targets are reasonable and achievable.

175. Table 4-6, Unweighted Availability for the City of Fort Worth's Contracts.

We further suggest that the City no longer give evaluation “points” to M/WBEs who submit qualifications-based proposals. This inflexible remedy may run afoul of the court-imposed requirement that a proposer making good faith efforts to meet the goal be treated the same way as one that might meet the goal, since only minority or women firms can receive these points. While a laudable attempt to provide a benefit to M/WBE prime vendors, we think the more prudent and defensible approach would be to permit certified firms to count their own participation towards meeting the contract goal, discussed below.

We urge the City to bid some contracts that it determines have significant opportunities for M/WBE participation without goals. These “control contracts” can illuminate whether certified firms are used or even solicited in the absence of goals. The development of some “unremediated markets” data, as held by the courts, will be probative of whether M/WBE utilization is the result of the City’s program or whether barriers on the basis of race or gender have been eliminated.

3. Count Certified Prime Vendors’ Performance Towards Meeting Contract Goals

The City’s current policy prohibits certified prime M/WBEs from counting their own participation towards contract goals. Many firms urged the City to follow the DBE program¹⁷⁶ and national trends and rescind this prohibition. This will accomplish several objectives. First, it is one of the few remedies available to remove barriers to the participation of minorities and women as prime firms, as setasides on the basis of race or gender are unlikely to survive judicial scrutiny. Next, it supports the creation of additional capacity in these firms, so that when they graduate from the program, they do not lose most (or even all) of their work because they can no longer be counted by other prime businesses towards meeting contract goals. Third, it clarifies that all contract dollars will be subject to the goal, not just the dollars anticipated to be spent with subcontractors. Finally, it more closely mirrors the way many industries function outside the operations of contracting affirmative action programs. Construction has been the model for these programs, but other types of businesses often do not utilize subcontractors on an extensive basis. Permitting certified prime firms to count their own participation gives them the ability to grow within the usual parameters of their industries.

176. 49 C.F.R. §26.51.

4. Review Program Policies, Procedures and Forms

To implement the new goals and contract goal setting methodology, the City should review all its current program components, including policies, procedures and forms. We suggest the following program elements, at minimum, be revised to reflect the findings in this Report and national best practices for M/WBE programs:

- Specification development, including the input of the BDE staff in development of solicitations.
- Special provisions and instructions to bidders about the program to ensure that changes are clear, and standards and requirements are fully spelled out, including the types of sanctions that may be imposed for non-compliance or contract breach.

Definitions for “commercially useful function and how M/WBE participation will be counted towards credit for meeting contract goals.

Criteria for establishing the “good faith efforts” of bidders who are unable to meet the goal. Standards for such “waivers” must be clear, with a fully delineated process to appeal adverse determinations.

Standards for contract performance, including substituting non-performing certified firms; reporting compliance; and seeking assistance from the BDE Office.

Contract closeout procedures and standards for determining that the contractor has met its affirmative action obligations.

The Office should further review its staff titles and job descriptions so that the responsibility for each program element is clear, and bidders and other City staff know who to contact and who to hold accountable.

Other City departments should likewise review their operations to make sure that diversity and inclusion are incorporated into their systems and outcomes.

5. Implement the Mentor-Protégé Program

Fort Worth has drafted a new Mentor-Protégé initiative that has not yet been implemented. In addition to the proposed elements, we suggest adding some aspects of the model developed for the U.S. Department of Transportation’s Disadvantaged Business Enterprise program.¹⁷⁷ These elements provide sup-

177. See 49 C.F.R. Part 26, Appendix D.

port for M/WBEs while incentivizing the mentor to provide the types of assistance that produces identified and achievable goals. These could include:

- A description of the qualifications of the mentor, including the firm's number of years of experience as a contractor or consultant; the agreement to devote a specified number of hours per month to working with the protégé; and the qualifications of the lead individual responsible for implementing the development plan.
- A description of the qualifications of the protégé, including the firm's number of years of experience as a contractor or consultant; the agreement to devote a specified number of hours per month to working with the mentor; and the qualifications of the M/WBE owner(s).
- A written City-approved development plan, which clearly sets forth the objectives of the parties and their respective roles, the duration of the arrangement, a schedule for meetings and development of action plans, and the services and resources to be provided by the mentor to the protégé. The assistance provided by the mentor must be detailed and directly relevant to City work. The development targets should be quantifiable and verifiable—such as increased bonding capacity, increased sales, increased areas of work specialty or prequalification—and reflect objectives that increase the protégé's capacities and expand its business areas and expertise.
- A long term and specific commitment between the parties, *e.g.*, 12 to 36 months.
- A provision for the use of any equipment or equipment rental.
- Extra credit for the mentor's use of the protégé to meet a contract goal (*e.g.*, 1.25 percent for each dollar spent), with a limit on the total percentage that could be credited on a specific contract and on total credits available under the Plan.
- Any financial assistance by the mentor to the protégé must be subject to prior written approval by the City and must not permit the mentor to assume control of the protégé.
- A fee schedule to cover the direct and indirect cost for services provided by the mentor for specific training and assistance to the protégé.
- A provision that the Plan may be terminated by mutual consent or by the City if the protégé no longer meets the eligibility standards for M/WBE certification; either party desires to be removed from the relationship; either party has failed or is unable to meet its obligations under the plan; the protégé is not progressing or is not likely to progress in accordance

with the plan; the protégé has reached a satisfactory level of self-sufficiency to compete without the plan; or the plan or its provisions are contrary to legal requirements.

- Submission of quarterly reports to the City by the parties indicating their progress toward each of the Plan's goals.
- Regular review by the BDE Office of the parties' compliance with the Plan and progress towards meeting its objectives. Failure to adhere to the terms of the Plan or to make satisfactory progress would be grounds for termination from the Program.

These additional guidelines could apply to firms that have matured past the stage of needing to attend contractor classes. It can also be adapted for non-construction businesses, such as engineering and information technology firms.

C. Conduct Regular BDE Program Reviews

To meet the requirements of strict constitutional scrutiny and ensure best practices in program administration continue to be applied, the City should conduct a full and thorough review of the evidentiary basis for the Program approximately every five to seven years.

A sunset date for the BDE program, when it will end unless reauthorized, is a constitutional requirement to meet the narrow tailoring test that race-and gender-conscious measures be used only when necessary. A new disparity study or other applicable research should be commissioned in time to meet the sunset date.

D. Develop Performance Measures for Program Success

The City should develop quantitative performance measures for overall success of the program to evaluate its effectiveness in reducing the systemic barriers identified by the Study. This will require enhanced data collection and monitoring. In addition to meeting goals, possible benchmarks might be:

- Progress towards meeting the overall, annual M/WBE goal.
- The number of bids or proposals, and the dollar amount of the awards and the goal shortfall, where the bidder was unable to meet the goals and submitted good faith efforts to do so.
- The number and dollar amount of bids or proposals rejected as non-responsive for failure to make good faith efforts to meet the goal.

- The number, type and dollar amount of M/WBE substitutions during contract performance.
- Increased bidding by certified firms as prime vendor.
- Increased prime contract awards to certified firms.
- Increased “capacity” of certified firms, as measured by bonding limits, size of jobs, profitability, complexity of work, etc.
- Increased variety in the industries in which M/WBEs are awarded prime contracts and subcontracts.

APPENDIX A: FURTHER EXPLANATION OF THE MULTIPLE REGRESSION ANALYSIS

As explained in the report, multiple regression statistical techniques seek to explore the relationship between a set of independent variables and a dependent variable. The following equation is a way to visualize this relationship:

$$DV = f(D, I, O),$$

where DV is the dependent variable; D is a set of demographic variables; I is a set of industry & occupation variables; and O is a set of other independent variables.

The estimation process takes this equation and transforms it into:

$$DV = C + (\beta_1 * D) + (\beta_2 * I) + (\beta_3 * O) + \mu,$$

where C is the constant term; β_1 , β_2 and β_3 are coefficients, and μ is the random error term.

The statistical technique seeks to estimate the values of the constant term and the coefficients.

In order to complete the estimation, the set of independent variables must be operationalized. For demographic variables, the estimation used race, gender and age. For industry and occupation variables, the relevant industry and occupation were utilized. For the other variables, age and education were used.

A coefficient was estimated for each independent variable. The broad idea is that a person's wage or earnings is dependent upon the person's race, gender, age, industry, occupation, and education. Since this Report examined the City of Fort Worth, the analysis was limited to data from the Dallas-Fort Worth Metropolitan Area. The coefficient for the new variable showed the impact of being a member of that race or gender in the county metropolitan area.

APPENDIX B: FURTHER EXPLANATION OF THE PROBIT REGRESSION ANALYSIS

Probit regression is a special type of regression analysis. While there are many differences between the underlying estimation techniques used in the probit regression and the standard regression analysis, the main differences from the layperson's point of view lie in the nature of the dependent variable and the interpretation of the coefficients associated with the independent variables.

The basic model looks the same:

$$DV = f(D, I, O),$$

where DV is the dependent variable; D is a set of demographic variables; I is a set of industry & occupation variables; and O is a set of other independent variables.

The estimation process takes this equation and transforms it into:

$$DV = C + (\beta_1 * D) + (\beta_2 * I) + (\beta_3 * O) + \mu,$$

where C is the constant term; β_1 , β_2 , and β_3 are coefficients, and μ is the random error term.

In the standard regression model, the dependent variable is continuous and can take on many values. In the probit model, the dependent variable is dichotomous and can take on only two values: zero or one. For instance, in the standard regression analysis, we may be exploring the impact of a change in some independent variable on wages. In this case, the value of one's wage might be any non-negative number. In contrast, in the probit regression analysis, the exploration might be the impact of a change in some independent variable on the probability that some event occurs. For instance, the question might be how an individual's gender impacts the probability of that person forming a business. In this case, the dependent variable has two values: zero, if a business is not formed; one, if a business is formed.

The second significant difference—the interpretation of the independent variables' coefficients—is fairly straight-forward in the standard regression model: the unit change in the independent variable impacts the dependent variable

by the amount of the coefficient.¹⁷⁸ However, in the probit model, the initial coefficients cannot be interpreted this way. One additional step, which can be computed easily by most statistical packages, must be undertaken in order to yield a result that indicates how the change in the independent variable affects the probability of an event (e.g., business formation) occurring. For instance, using our previous example of the impact on gender on business formation, if the independent variable was WOMAN (with a value of 0 if the individual was male and 1 if the individual was female) and the final transformation of the coefficient of WOMAN was -0.12, we would interpret this to mean that women have a 12% lower probability of forming a business compared to men.

178. The exact interpretation depends upon the functional form of the model.

APPENDIX C: SIGNIFICANCE LEVELS

Many tables in this Report contain asterisks indicating that a number has statistical significance at 0.001, 0.01, or 0.05 levels (sometimes, this is presented as 99.9%; 99% and 95%, respectively) and the body of the report repeats these descriptions. While the use of the term seems important, it is not self-evident what the term means. This Appendix provides a general explanation of significance levels.

This Report seeks to address the question whether non-Whites and White women received disparate treatment in the economy relative to White males. From a statistical viewpoint, this primary question has two sub-questions:

- What is the relationship between the independent variable and the dependent variable?
- What is the probability that the relationship between the independent variable and the dependent variable is equal to zero?

For example, an important question facing the City as it explores whether each racial and ethnic group and White women continue to experience discrimination in its markets is do non-Whites and White women receive lower wages than White men? As discussed in Appendix A, one way to uncover the relationship between the dependent variable (*e.g.*, wages) and the independent variable (*e.g.* non-Whites) is through multiple regression analysis. An example helps to explain this concept.

Let us say, for example, this analysis determines that non-Whites receive wages that are 35% less than White men after controlling for other factors, such as education and industry, which might account for the differences in wages. However, this finding is only an estimate of the relationship between the independent variable (*e.g.*, non-Whites) and the dependent variable (*e.g.*, wages) – the first sub-question. It is still important to determine how accurate is that estimation, that is, what is the probability the estimated relationship is equal to zero – the second sub-question.

To resolve the second sub-question, statistical hypothesis tests are utilized. Hypothesis testing assumes that there is no relationship between belonging to a particular demographic group and the level of economic utilization relative to White men (*e.g.*, non-Whites earn identical wages compared to White men or non-Whites earn 0% less than White men). This sometimes is called the null hypothesis. We then calculate a confidence interval to find the probability that the observed relationship (*e.g.*, - 35%) is between 0 and minus that confidence interval.¹⁷⁹ The confidence interval will vary depending upon the level of confi-

dence (statistical significance) we wish to have in our conclusion. When a number is statistically significant at the 0.001 level, this indicates that we can be 99.9% certain that the number in question (in this example, -35%) lies outside of the confidence interval. When a number is statistically significant at the 0.01 level, this indicates that we can be 99.0% certain that the number in question lies outside of the confidence interval. When a number is statistically significant at the 0.05 level, this indicates that we can be 95.0% certain that the number in question lies outside of the confidence interval.

179. Because 0 can only be greater than -35%, we only speak of “minus the confidence level”. This is a one-tailed hypothesis test. If, in another example, the observed relationship could be above or below the hypothesized value, then we would say “plus or minus the confidence level” and this would be a two-tailed test.

APPENDIX D: ADDITIONAL DATA FROM THE UTILIZATION ANALYSES FOR CITY OF FORT WORTH¹⁸⁰

**Table D-1: Industry Percentage Distribution of Contracts by Dollars Paid
All Contracts**

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
237310	Highway, Street, and Bridge Construction	31.323837%	31.3%
237110	Water and Sewer Line and Related Structures Construction	28.207989%	59.5%
236220	Commercial and Institutional Building Construction	7.720811%	67.3%
541330	Engineering Services	5.134538%	72.4%
484220	Specialized Freight (except Used Goods) Trucking, Local	2.795617%	75.2%
238210	Electrical Contractors and Other Wiring Installation Contractors	2.777696%	78.0%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	1.946215%	79.9%
237990	Other Heavy and Civil Engineering Construction	1.832413%	81.7%
238910	Site Preparation Contractors	1.427471%	83.2%
238220	Plumbing, Heating, and Air-Conditioning Contractors	1.399248%	84.6%
423840	Industrial Supplies Merchant Wholesalers	1.292889%	85.9%

180. A breakdown of the unconstrained product market by Prime and Subcontractor data is not provided for FAA-funded contracts because there are only 46 contracts in the data set. A breakdown of Non-Car Rental Contracts by Prime and Subcontractor is not provided because the ACDBEs functioned as joint venture partners.

City of Fort Worth Disparity Study 2020

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
324121	Asphalt Paving Mixture and Block Manufacturing	1.260695%	87.1%
561730	Landscaping Services	1.170192%	88.3%
327320	Ready-Mix Concrete Manufacturing	1.089406%	89.4%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	1.068667%	90.4%
238110	Poured Concrete Foundation and Structure Contractors	0.779956%	91.2%
238120	Structural Steel and Precast Concrete Contractors	0.764404%	92.0%
238990	All Other Specialty Trade Contractors	0.658543%	92.7%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	0.625914%	93.3%
484110	General Freight Trucking, Local	0.564356%	93.8%
561720	Janitorial Services	0.432614%	94.3%
238320	Painting and Wall Covering Contractors	0.337660%	94.6%
238190	Other Foundation, Structure, and Building Exterior Contractors	0.332435%	94.9%
238310	Drywall and Insulation Contractors	0.323255%	95.3%
424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	0.322810%	95.6%
238140	Masonry Contractors	0.310830%	95.9%
238150	Glass and Glazing Contractors	0.283132%	96.2%
541370	Surveying and Mapping (except Geophysical) Services	0.272199%	96.5%
238160	Roofing Contractors	0.265644%	96.7%
332312	Fabricated Structural Metal Manufacturing	0.226625%	96.9%
238390	Other Building Finishing Contractors	0.218236%	97.2%
561990	All Other Support Services	0.187125%	97.4%
444190	Other Building Material Dealers	0.176436%	97.5%
238350	Finish Carpentry Contractors	0.146979%	97.7%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	0.143689%	97.8%
238330	Flooring Contractors	0.138928%	98.0%
541380	Testing Laboratories	0.137969%	98.1%
423390	Other Construction Material Merchant Wholesalers	0.119058%	98.2%
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	0.102338%	98.3%
237120	Oil and Gas Pipeline and Related Structures Construction	0.102269%	98.4%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	0.102232%	98.5%
562910	Remediation Services	0.088890%	98.6%
561440	Collection Agencies	0.083994%	98.7%
327332	Concrete Pipe Manufacturing	0.072283%	98.8%
238290	Other Building Equipment Contractors	0.072264%	98.8%
561320	Temporary Help Services	0.057148%	98.9%
321114	Wood Preservation	0.053605%	99.0%
221330	Steam and Air-Conditioning Supply	0.053550%	99.0%
541990	All Other Professional, Scientific, and Technical Services	0.052883%	99.1%
331511	Iron Foundries	0.049336%	99.1%
331110	Iron and Steel Mills and Ferroalloy Manufacturing	0.047825%	99.2%
524126	Direct Property and Casualty Insurance Carriers	0.046516%	99.2%
333120	Construction Machinery Manufacturing	0.044743%	99.2%
339950	Sign Manufacturing	0.039911%	99.3%
562111	Solid Waste Collection	0.038027%	99.3%
212312	Crushed and Broken Limestone Mining and Quarrying	0.037749%	99.4%
424710	Petroleum Bulk Stations and Terminals	0.035991%	99.4%

City of Fort Worth Disparity Study 2020

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
541310	Architectural Services	0.035768%	99.4%
541191	Title Abstract and Settlement Offices	0.032848%	99.5%
238340	Tile and Terrazzo Contractors	0.032263%	99.5%
332618	Other Fabricated Wire Product Manufacturing	0.029350%	99.5%
236210	Industrial Building Construction	0.027252%	99.6%
561621	Security Systems Services (except Locksmiths)	0.027127%	99.6%
314999	All Other Miscellaneous Textile Product Mills	0.026594%	99.6%
337215	Showcase, Partition, Shelving, and Locker Manufacturing	0.026275%	99.6%
326122	Plastics Pipe and Pipe Fitting Manufacturing	0.024743%	99.7%
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	0.022781%	99.7%
327310	Cement Manufacturing	0.021752%	99.7%
424590	Other Farm Product Raw Material Merchant Wholesalers	0.021080%	99.7%
454310	Fuel Dealers	0.020129%	99.7%
327410	Lime Manufacturing	0.019542%	99.8%
321918	Other Millwork (including Flooring)	0.013530%	99.8%
444120	Paint and Wallpaper Stores	0.013242%	99.8%
561311	Employment Placement Agencies	0.012141%	99.8%
541820	Public Relations Agencies	0.011607%	99.8%
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	0.011385%	99.8%
423440	Other Commercial Equipment Merchant Wholesalers	0.009788%	99.8%
424690	Other Chemical and Allied Products Merchant Wholesalers	0.009609%	99.8%
325520	Adhesive Manufacturing	0.009522%	99.9%
221320	Sewage Treatment Facilities	0.009244%	99.9%
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	0.008695%	99.9%
212321	Construction Sand and Gravel Mining	0.008245%	99.9%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
541360	Geophysical Surveying and Mapping Services	0.008018%	99.9%
424950	Paint, Varnish, and Supplies Merchant Wholesalers	0.007678%	99.9%
213112	Support Activities for Oil and Gas Operations	0.007015%	99.9%
423830	Industrial Machinery and Equipment Merchant Wholesalers	0.006360%	99.9%
562991	Septic Tank and Related Services	0.006302%	99.9%
541320	Landscape Architectural Services	0.006222%	99.9%
541720	Research and Development in the Social Sciences and Humanities	0.006216%	99.9%
541620	Environmental Consulting Services	0.006031%	99.9%
336211	Motor Vehicle Body Manufacturing	0.004769%	99.9%
324110	Petroleum Refineries	0.004520%	99.9%
238130	Framing Contractors	0.004249%	99.9%
333131	Mining Machinery and Equipment Manufacturing	0.003737%	100.0%
332919	Other Metal Valve and Pipe Fitting Manufacturing	0.003544%	100.0%
541420	Industrial Design Services	0.003339%	100.0%
484121	General Freight Trucking, Long-Distance, Truckload	0.003247%	100.0%
488999	All Other Support Activities for Transportation	0.003076%	100.0%
541511	Custom Computer Programming Services	0.002782%	100.0%
541110	Offices of Lawyers	0.002697%	100.0%
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	0.002159%	100.0%
517311	Wired Telecommunications Carriers	0.001908%	100.0%
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	0.001821%	100.0%
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	0.001735%	100.0%
561790	Other Services to Buildings and Dwellings	0.001419%	100.0%

City of Fort Worth Disparity Study 2020

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
541350	Building Inspection Services	0.001394%	100.0%
316998	All Other Leather Good and Allied Product Manufacturing	0.001346%	100.0%
237130	Power and Communication Line and Related Structures Construction	0.001332%	100.0%
331221	Rolled Steel Shape Manufacturing	0.001261%	100.0%
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	0.001207%	100.0%
541211	Offices of Certified Public Accountants	0.001186%	100.0%
541611	Administrative Management and General Management Consulting Services	0.001138%	100.0%
327110	Pottery, Ceramics, and Plumbing Fixture Manufacturing	0.001060%	100.0%
519110	News Syndicates	0.000986%	100.0%
332323	Ornamental and Architectural Metal Work Manufacturing	0.000926%	100.0%
541613	Marketing Consulting Services	0.000926%	100.0%
531390	Other Activities Related to Real Estate	0.000818%	100.0%
323111	Commercial Printing (except Screen and Books)	0.000743%	100.0%
488410	Motor Vehicle Towing	0.000660%	100.0%
713110	Amusement and Theme Parks	0.000563%	100.0%
561910	Packaging and Labeling Services	0.000532%	100.0%
332996	Fabricated Pipe and Pipe Fitting Manufacturing	0.000441%	100.0%
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	0.000386%	100.0%
532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	0.000340%	100.0%
424120	Stationery and Office Supplies Merchant Wholesalers	0.000340%	100.0%
561499	All Other Business Support Services	0.000203%	100.0%
541340	Drafting Services	0.000171%	100.0%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0.000164%	100.0%
531320	Offices of Real Estate Appraisers	0.000162%	100.0%
562112	Hazardous Waste Collection	0.000137%	100.0%
562211	Hazardous Waste Treatment and Disposal	0.000118%	100.0%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	0.000057%	100.0%
423710	Hardware Merchant Wholesalers	0.000017%	100.0%
TOTAL			100.0%

Source: CHA analysis of the City data.

**Table D-2: Industry Percentage Distribution of Contracts by Dollars Paid
Prime Contracts**

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
237110	Water and Sewer Line and Related Structures Construction	37.00%	37.0%
237310	Highway, Street, and Bridge Construction	36.95%	73.9%
236220	Commercial and Institutional Building Construction	11.26%	85.2%
541330	Engineering Services	6.71%	91.9%
237990	Other Heavy and Civil Engineering Construction	1.89%	93.8%
238210	Electrical Contractors and Other Wiring Installation Contractors	1.45%	95.3%
324121	Asphalt Paving Mixture and Block Manufacturing	1.28%	96.5%
238910	Site Preparation Contractors	1.05%	97.6%
238990	All Other Specialty Trade Contractors	0.72%	98.3%
561720	Janitorial Services	0.42%	98.7%
238320	Painting and Wall Covering Contractors	0.37%	99.1%
541380	Testing Laboratories	0.17%	99.3%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
561730	Landscaping Services	0.14%	99.4%
561440	Collection Agencies	0.13%	99.5%
562910	Remediation Services	0.12%	99.6%
238110	Poured Concrete Foundation and Structure Contractors	0.08%	99.7%
238220	Plumbing, Heating, and Air-Conditioning Contractors	0.08%	99.8%
212312	Crushed and Broken Limestone Mining and Quarrying	0.06%	99.9%
541370	Surveying and Mapping (except Geophysical) Services	0.04%	99.9%
541310	Architectural Services	0.03%	99.9%
333120	Construction Machinery Manufacturing	0.03%	100.0%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	0.02%	100.0%
561311	Employment Placement Agencies	0.02%	100.0%
TOTAL			100.0%

Source: CHA analysis of the City data.

Table D-3: Industry Percentage Distribution of Contracts by Dollars Paid Subcontracts

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
237310	Highway, Street, and Bridge Construction	20.0098%	20.0%
237110	Water and Sewer Line and Related Structures Construction	10.5348%	30.5%
484220	Specialized Freight (except Used Goods) Trucking, Local	8.4162%	39.0%
423510	Metal Service Centers and Other Metal Merchant Wholesalers	5.8591%	44.8%
238210	Electrical Contractors and Other Wiring Installation Contractors	5.4506%	50.3%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
238220	Plumbing, Heating, and Air-Conditioning Contractors	4.0516%	54.3%
423840	Industrial Supplies Merchant Wholesalers	3.8923%	58.2%
327320	Ready-Mix Concrete Manufacturing	3.2797%	61.5%
561730	Landscaping Services	3.2484%	64.7%
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers	3.2172%	68.0%
238120	Structural Steel and Precast Concrete Contractors	2.3012%	70.3%
238910	Site Preparation Contractors	2.1944%	72.5%
238110	Poured Concrete Foundation and Structure Contractors	2.1783%	74.6%
541330	Engineering Services	1.9761%	76.6%
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	1.8843%	78.5%
237990	Other Heavy and Civil Engineering Construction	1.7152%	80.2%
484110	General Freight Trucking, Local	1.6990%	81.9%
324121	Asphalt Paving Mixture and Block Manufacturing	1.2248%	83.1%
238190	Other Foundation, Structure, and Building Exterior Contractors	1.0008%	84.1%
238310	Drywall and Insulation Contractors	0.9732%	85.1%
424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	0.9718%	86.1%
238140	Masonry Contractors	0.9358%	87.0%
238150	Glass and Glazing Contractors	0.8524%	87.9%
238160	Roofing Contractors	0.7997%	88.7%
541370	Surveying and Mapping (except Geophysical) Services	0.7326%	89.4%
332312	Fabricated Structural Metal Manufacturing	0.6823%	90.1%

City of Fort Worth Disparity Study 2020

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
238390	Other Building Finishing Contractors	0.6570%	90.7%
236220	Commercial and Institutional Building Construction	0.6010%	91.3%
561990	All Other Support Services	0.5633%	91.9%
238990	All Other Specialty Trade Contractors	0.5358%	92.4%
444190	Other Building Material Dealers	0.5312%	93.0%
561720	Janitorial Services	0.4679%	93.4%
238350	Finish Carpentry Contractors	0.4425%	93.9%
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	0.4326%	94.3%
238330	Flooring Contractors	0.4182%	94.7%
423390	Other Construction Material Merchant Wholesalers	0.3584%	95.1%
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	0.3081%	95.4%
237120	Oil and Gas Pipeline and Related Structures Construction	0.3079%	95.7%
238320	Painting and Wall Covering Contractors	0.2692%	96.0%
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	0.2579%	96.2%
327332	Concrete Pipe Manufacturing	0.2176%	96.5%
238290	Other Building Equipment Contractors	0.2176%	96.7%
561320	Temporary Help Services	0.1720%	96.8%
321114	Wood Preservation	0.1614%	97.0%
221330	Steam and Air-Conditioning Supply	0.1612%	97.2%
541990	All Other Professional, Scientific, and Technical Services	0.1592%	97.3%
331511	Iron Foundries	0.1485%	97.5%
331110	Iron and Steel Mills and Ferroalloy Manufacturing	0.1440%	97.6%
524126	Direct Property and Casualty Insurance Carriers	0.1400%	97.8%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
339950	Sign Manufacturing	0.1202%	97.9%
562111	Solid Waste Collection	0.1145%	98.0%
424710	Petroleum Bulk Stations and Terminals	0.1084%	98.1%
541191	Title Abstract and Settlement Offices	0.0989%	98.2%
238340	Tile and Terrazzo Contractors	0.0971%	98.3%
332618	Other Fabricated Wire Product Manufacturing	0.0884%	98.4%
333120	Construction Machinery Manufacturing	0.0829%	98.5%
541380	Testing Laboratories	0.0828%	98.5%
236210	Industrial Building Construction	0.0820%	98.6%
561621	Security Systems Services (except Locksmiths)	0.0817%	98.7%
314999	All Other Miscellaneous Textile Product Mills	0.0801%	98.8%
337215	Showcase, Partition, Shelving, and Locker Manufacturing	0.0791%	98.9%
326122	Plastics Pipe and Pipe Fitting Manufacturing	0.0745%	98.9%
331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	0.0686%	99.0%
327310	Cement Manufacturing	0.0655%	99.1%
424590	Other Farm Product Raw Material Merchant Wholesalers	0.0635%	99.1%
454310	Fuel Dealers	0.0606%	99.2%
327410	Lime Manufacturing	0.0588%	99.3%
541310	Architectural Services	0.0477%	99.3%
321918	Other Millwork (including Flooring)	0.0407%	99.4%
444120	Paint and Wallpaper Stores	0.0399%	99.4%
541820	Public Relations Agencies	0.0349%	99.4%
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	0.0343%	99.5%
423440	Other Commercial Equipment Merchant Wholesalers	0.0295%	99.5%
424690	Other Chemical and Allied Products Merchant Wholesalers	0.0289%	99.5%

City of Fort Worth Disparity Study 2020

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
325520	Adhesive Manufacturing	0.0287%	99.5%
221320	Sewage Treatment Facilities	0.0278%	99.6%
423740	Refrigeration Equipment and Supplies Merchant Wholesalers	0.0262%	99.6%
212321	Construction Sand and Gravel Mining	0.0248%	99.6%
541360	Geophysical Surveying and Mapping Services	0.0241%	99.6%
424950	Paint, Varnish, and Supplies Merchant Wholesalers	0.0231%	99.7%
562910	Remediation Services	0.0213%	99.7%
213112	Support Activities for Oil and Gas Operations	0.0211%	99.7%
423830	Industrial Machinery and Equipment Merchant Wholesalers	0.0191%	99.7%
562991	Septic Tank and Related Services	0.0190%	99.8%
541320	Landscape Architectural Services	0.0187%	99.8%
541720	Research and Development in the Social Sciences and Humanities	0.0187%	99.8%
541620	Environmental Consulting Services	0.0182%	99.8%
336211	Motor Vehicle Body Manufacturing	0.0144%	99.8%
324110	Petroleum Refineries	0.0136%	99.8%
238130	Framing Contractors	0.0128%	99.8%
333131	Mining Machinery and Equipment Manufacturing	0.0113%	99.9%
332919	Other Metal Valve and Pipe Fitting Manufacturing	0.0107%	99.9%
541420	Industrial Design Services	0.0101%	99.9%
484121	General Freight Trucking, Long-Distance, Truckload	0.0098%	99.9%
488999	All Other Support Activities for Transportation	0.0093%	99.9%
541511	Custom Computer Programming Services	0.0084%	99.9%
541110	Offices of Lawyers	0.0081%	99.9%
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	0.0065%	99.9%

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
517311	Wired Telecommunications Carriers	0.0057%	99.9%
541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	0.0055%	99.9%
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	0.0052%	99.9%
561790	Other Services to Buildings and Dwellings	0.0043%	99.9%
541350	Building Inspection Services	0.0042%	99.9%
316998	All Other Leather Good and Allied Product Manufacturing	0.0041%	100.0%
237130	Power and Communication Line and Related Structures Construction	0.0040%	100.0%
331221	Rolled Steel Shape Manufacturing	0.0038%	100.0%
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	0.0036%	100.0%
541211	Offices of Certified Public Accountants	0.0036%	100.0%
541611	Administrative Management and General Management Consulting Services	0.0034%	100.0%
327110	Pottery, Ceramics, and Plumbing Fixture Manufacturing	0.0032%	100.0%
519110	News Syndicates	0.0030%	100.0%
332323	Ornamental and Architectural Metal Work Manufacturing	0.0028%	100.0%
541613	Marketing Consulting Services	0.0028%	100.0%
531390	Other Activities Related to Real Estate	0.0025%	100.0%
323111	Commercial Printing (except Screen and Books)	0.0022%	100.0%
488410	Motor Vehicle Towing	0.0020%	100.0%
713110	Amusement and Theme Parks	0.0017%	100.0%
561910	Packaging and Labeling Services	0.0016%	100.0%
332996	Fabricated Pipe and Pipe Fitting Manufacturing	0.0013%	100.0%

City of Fort Worth Disparity Study 2020

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	0.0012%	100.0%
532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	0.0010%	100.0%
424120	Stationery and Office Supplies Merchant Wholesalers	0.0010%	100.0%
561499	All Other Business Support Services	0.0006%	100.0%
541340	Drafting Services	0.0005%	100.0%
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	0.0005%	100.0%
531320	Offices of Real Estate Appraisers	0.0005%	100.0%
562112	Hazardous Waste Collection	0.0004%	100.0%
562211	Hazardous Waste Treatment and Disposal	0.0004%	100.0%
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	0.0002%	100.0%
423710	Hardware Merchant Wholesalers	0.0001%	100.0%
237310	Highway, Street, and Bridge Construction	20.0098%	20.0%
TOTAL			100.0%

Source: CHA analysis of the City data.