

RTA Availability Study

2016



**Regional
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About the Study Team

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I. Executive Summary

Colette Holt & Associates was retained by the Regional Transportation Authority of Illinois (“RTA”) to perform a study to determine the availability of Disadvantaged Business Enterprises (“DBEs”) in its market area and evaluate its DBE program. The objective was to meet the requirements of strict constitutional scrutiny applicable to DBE programs and RTA’s obligations as a recipient of Federal Transit Administration (“FTA”) funds under 49 C.F.R. Part 26. We analyzed purchase order and contract data for calendar years 2009 through 2013.

A. Study Methodology and Data

The methodology for this study embodies the constitutional principles of *City of Richmond v. Croson* and *Adarand v. Peña* the case law in the Seventh Circuit Court of Appeals; the DBE program’s regulatory requirements in 49 C.F.R. Part 26; and best practices for designing DBE programs. The CHA approach has been specifically upheld by courts, including the Seventh Circuit. 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 for transportation agencies.

We determined the availability of DBEs in RTA’s geographic and industry market area. We further analyzed disparities in the wider economy, where affirmative action is rarely practiced, to evaluate whether barriers continue to impede opportunities for minorities and women when remedial intervention is not imposed. We gathered anecdotal data on DBEs’ experiences with RTA’s DBE program and its current race-neutral measures. We examined race- and gender-based barriers throughout the economy through focus groups with business owners and stakeholders, and interviews with agency staff. We also evaluated RTA’s DBE program and race- and gender-neutral policies and procedures for their effectiveness and conformance with Part 26 and national standards for DBE programs. In addition to addressing RTA’s constitutional responsibilities, these data are also relevant to RTA’s annual goal setting process under 49 C.F.R. § 26.45.

Based on the results of these extensive analyses, we make recommendations for narrowly tailoring RTA’s DBE programs.

B. Study Findings

1. RTA's Disadvantaged Business Enterprise Program

As a condition of receipt of US Department of Transportation ("USDOT") funds through the FTA, RTA is required to implement a DBE program in compliance with 49 C.F.R. Part 26. RTA is also required to implement a DBE program for its non-federal-aid contracts under Illinois law. The implementation of the DBE program for both funding sources for contracts is treated similarly. We therefore refer to the DBE program.

RTA's DBE program plan has been approved by FTA. RTA's triennial DBE goal is 19.0%, 2.0% to be achieved through race-neutral measures and 17.0% through race-conscious contract goals. RTA does not engage in a separate goal

RTA's DBE program is administered by the Law Department. RTA's Regulatory Compliance Office ("RCO") is the designated DBE Liaison Officer.

RTA conducts various types of outreach to DBEs and other small firms, such as attendance at stakeholder groups' meetings and conferences. It is an active participant in the annual Transportation Symposium conducted by the Chicago area transportation agencies, where DBEs and other small businesses participate in seminars and network with agency officials and other prime contractors and businesses.

RTA has developed procedures, forms and other documents to implement the program and assist interested firms to participate on RTA's contracts. These include contract solicitation specifications that provide instructions for completing the DBE Compliance Plan, as well as information on the Program and resources for vendor compliance; staff program worksheets and checklists; and DBE payment tracking mechanisms.

In addition to setting DBE contract goals on appropriate solicitations, RTA applies several race-neutral measures to reduce barriers. These include establishing a race-neutral small business participation goal; small business set-asides; outreach to certified small businesses; reviewing insurance requirement to relax liability limits for small firms; educating project managers about the programs; and submitting reports to the Executive director and the Board of Directors.

To explore the impacts of RTA's contracting policies and procedures and the implementation of the DBE program, we interviewed 26 individuals about their experiences and solicited their suggestions for changes. They provided the following experiences and suggestions:

- Access to information and networks: Some participants reported it was difficult to access information about RTA projects or to know whom to contact at the agency to present credentials.
- Project qualifications and evaluations: Many minority and women interviewees reported that RTA's project managers prefer to work with large established firms and often discount the capabilities of DBEs.
- Contract size and complexity: The size and complexity of RTA's projects was an impediment to all small firms' participation. Prime contracts were especially difficult to obtain. "Unbundling" contracts into smaller scopes or smaller dollar values to increase DBEs' abilities to obtain prime and subcontract work was recommended as one means to reduce barriers. A small business setaside on a race- and gender-neutral basis was another prescription for opening up opportunities for DBEs and other small firms, as well as a way to deflect the ire of prime consulting firms, with whom DBEs will need to continue to work as subconsultants
- Outreach efforts to DBEs: While RTA does participate in interagency outreach events such as the annual Transit Symposium for the Chicago area agencies, additional targeted networking events for specific RTA projects for DBEs and prime contractors were recommended by several interviewees.
- Meeting DBE contract goals: There was strong support for the DBE program from prime contractors and consultants. Most prime firms were able to meet the contract goals. Some have used DBEs outside of RTA contracts. Given the specialized nature of RTA's projects, some prime vendors found it difficult to find DBEs; others found it challenging to meet their DBE commitments because of the requirements of particular projects. Making it easier to find qualified DBEs was a repeated request. Several prime consultants and contractors commented that RTA needs a more targeted contract goal setting procedure. While the prime firms generally met their contract goals, several DBEs reported that even the use of contract goals does not always foster opportunities for DBEs to perform as subconsultants. The DBE contract goal was perceived by DBEs to be the ceiling, not the floor, for their subcontracting participation. Some DBEs had been substituted or dropped from contracts in other DBE programs, and cautioned that RTA must be vigilant to ensure compliance with contractual commitments to DBEs; they drew a favorable contrast between RTA's approach and that of another local agency.
- Contract compliance monitoring: An electronic monitoring system similar to those in use by other Chicago area governments was one way to

ensure compliance with the DBE program and prompt payment requirements.

2. RTA’s Industry and Geographic Markets

49 C.F.R. Part 26 requires that a recipient limit its race-based remedial program to firms doing business in its geographic and industry markets. CHA therefore analyzed all formal contracts issued by RTA during the Study period. The Final Contract File for analysis contained a total award amount of \$49,103,101. The Final Contract Data File for analysis of FTA-assisted contracts contained 5 prime contracts with a total paid amount of \$1,246,962; of this amount, 7 associated subcontracts received \$82,085. The Final Contract Data File for analysis of non-federally-assisted contracts contained 68 prime contracts with a total paid amount of \$41,333,884; of this amount, 24 associated subcontracts received \$6,440,170. The Final Contract Data File was used to determine the geographic and product markets for the Study, to estimate the utilization of DBEs on those contracts, and to calculate DBE availability in RTA’s marketplace.

During the study period, however, RTA only let 5 federally-assisted contracts. The small number of contracts had two impacts on the Study methodology. First, all NAICS codes represented in the federally-funded subset of the agency’s Final Contract Data File were deemed in the agency’s product market area; second, since all contracts were to be examined, there was no need initially to constrain this product market by geography. Table A presents the NAICS codes for RTA’s federally-funded contracts, the label for each NAICS code, and the industry percentage distribution of spending across NAICS codes.

Table A presents the distribution of the number of contracts and the amount of contract dollars across all industry sectors. Chapter IV provides tables disaggregated by dollars paid to prime contractors and dollars paid to subcontractors.

Table A: Industry Percentage Distribution of All Contracts by Dollars Paid

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
511210	Software Publishers	41.83%	41.83%
541613	Marketing Consulting Services	36.95%	78.79%
541611	Administrative Management and General Management Consulting Services	11.53%	90.31%
541511	Custom Computer Programming Services	3.95%	94.26%

541910	Marketing Research and Public Opinion Polling	2.26%	96.52%
541512	Computer Systems Design Services	1.93%	98.44%
541840	Media Representatives	1.35%	99.80%
323114	Commercial printing (except screen and books)	0.20%	100.00%

Source: CHA analysis of RTA data.

3. RTA's Utilization of DBEs in Its Market Areas

The next step was to determine the dollar value of RTA's utilization of DBEs in its market area, as measured by payments to prime firms and associated subcontractors and disaggregated by race and gender. To confirm RTA's records for payments to subcontractors, we contacted the prime vendors to request that they describe in detail their contract and associated subcontracts, including race, gender and dollar amount paid to date. We further developed a Master D/M/WBE Directory based upon lists solicited from dozens of agencies and organizations. We used the results of this extensive data collection process to assign minority or woman status to the ownership of each firm in the analysis.

Table C presents the distribution of contract dollars by industry sectors for federally-funded contracts. Table D presents the distribution of contract dollars by industry sectors for locally-funded contracts. Chapter IV provides detailed breakdowns of these results.

Table C: Distribution of Contract Dollars– Federal Funds, (share of total dollars)

NAICS	DBE	Non-DBE	TOTAL
323114	2,712.00	0.00	2,712.00
511210	0.00	556,005.00	556,005.00
541511	0.00	52,440.00	52,440.00
541512	25,594.00	0.00	25,594.00
541611	145.00	153,047.00	153,192.00
541613	5,639.00	485,470.00	491,110.00
541840	17,995.00	0.00	17,995.00
541910	30,000.00	0.00	30,000.00
Total	82,085.00	1,246,962.00	1,329,047.00

Source: CHA analysis of RTA data.

Table D: Distribution of Contract Dollars– No Federal Funds, (share of total dollars)

NAICS	DBE	Non-DBE	TOTAL
485111	76,200.00	514,200.00	590,400.00
518210	0.00	25,138.00	25,138.00
524210	78,845.00	16,188,033.00	16,266,878.00
541110	0.00	2,863,089.00	2,863,089.00
541211	139,950.00	444,307.00	584,257.00
541611	3,836,590.00	159,222.00	3,995,813.00
541614	0.00	102,404.00	102,404.00
541810	0.00	2,942,119.00	2,942,119.00
541860	986,379.00	0.00	986,379.00
561320	1,196,599.00	2,232,252.00	3,428,851.00
Total	6,314,564.00	25,470,764.00	31,785,328.00

Source: CHA analysis of RTA data.

4. Availability of DBEs in RTA’s Market

Using the “custom census” approach to estimating availability and the further assignment of race and gender using the Master Directory and other sources, we determined the aggregated availability of DBEs, weighted by RTA’s spending in its geographic and industry markets, to be 15.68% for federally-funded contracts and 13.82% for locally-funded contracts. Table E presents the weighted availability data for various racial and gender categories for federally-funded contracts. Table F presents the weighted availability data for various racial and gender categories for locally-funded contracts.

Table E: Aggregated Weighted Availability – Federal Funds (total dollars)

NAICS	DBE	Non-DBE	TOTAL
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Total	15.68%	84.32%	100.00%
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Source: CHA analysis of RTA data; Hoovers; CHA Master Directory.

Table F: Aggregated Weighted Availability – No Federal Funds (total dollars)

NAICS	DBE	Non-DBE	TOTAL
Total	13.82%	86.18%	100.00%

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

Because RTA’s authority to set DBE goals is derivative– that is, it flows from federal and state law, not its own actions– it relies upon the determination of its authorizing governments that there is a compelling interest in remedying discrimination based upon a strong basis in evidence. Therefore, it is not necessary for RTA to find that there are disparities in its own contracting activities to implement its DBE programs

5. Analysis of Race and Gender Disparities in RTA’s Market

We explored the data and literature relevant to how discrimination in RTA’s market and throughout the wider economy affects the ability of minorities and women to fairly and fully engage in RTA’s contract opportunities. First, we analyzed the earnings of minorities and women relative to White men, the rates at which DBEs in Illinois form firms and their earnings from those firms. Next, 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 overall marketplace discrimination without some type of affirmative interventions. We analyzed the following data and literature:

- Data from the Census Bureau’s Survey of Business Owners indicate very large disparities between DBE firms and non-DBE firms when examining the sales of all firms, the sales of employer firms (firms that employ at least one worker), or the payroll of employer firms.
- Data from the Census Bureau’s American Community Survey (“ACS”) indicate that Blacks, Hispanics, Native Americans, Asian/Pacific Islanders, Others, 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 further reports that minorities continue to face constraints on their entrepreneurial success based on race. These constraints negatively impact the ability of firms to form, to grow, and to succeed.

Taken together with other evidence such as anecdotal data and the judicial findings regarding discrimination in the Illinois and Chicago-area construction industry, this is the type of proof that addresses whether, in the absence of DBE contract goals, RTA will be a passive participant in the discriminatory systems found throughout Illinois. These economy-wide analyses are relevant and probative to whether the agency may continue to employ narrowly tailored race- and gender-conscious measures to ensure equal opportunities to access its contracts and associated subcontracts.

6. Qualitative Evidence of Race and Gender Barriers in RTA's 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 DBEs such that race-conscious measures are supportable. To explore this type of anecdotal evidence, we conducted two group interviews, totaling 26 participants. Most reported that, while progress has been made in reducing barriers on the basis of race and gender, significant inequities remain obstacles to full and fair opportunities. DBE contract goals remain necessary to level the playing field.

- Discriminatory attitudes and negative perceptions of competency: Several participants reported that potential clients display negative attitudes about the competency and professionalism of minorities and women. The assumption is that minority firms are less qualified. Because of negative perceptions of minority and women businesses, DBE certification can actually reduce a firm's opportunities.
- Obtaining work on an equal basis: to unanimous agreement that goals remain necessary to level the playing field and equalize opportunities. DBEs sought the right to compete on a fair and equal basis. Without goals, DBEs believed they would be shut out of the RTA's market. Interviewees were clear that contract goals remain necessary to ensure equal opportunities on RTA projects. Prime contracts were especially difficult to obtain. This is especially important for RTA, since most of its work is professional services projects where subjective evaluations can support biased perceptions and attitudes. A few DBEs reported that prime contractors who had become familiar with their qualifications had then used them on no goals contracts.

II. Legal Standards for Disadvantaged Business Enterprise Programs

A. Summary of Constitutional Standards

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

- The government must establish its “compelling interest” in remedying 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 discrimination, that is, the program must be directed at the types and depth of discrimination identified.¹

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

- Statistical evidence of the underutilization of minority 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 as disparity indices, comparable to the type of “disparate impact” analysis used in employment discrimination cases.
- Anecdotal evidence of race-based barriers to the full and fair participation of minority firms in the market area and in seeking contracts with the agency, comparable to the “disparate treatment” analysis used in employment discrimination cases.² Anecdotal data can consist of interviews, surveys, public hearings, academic literature, judicial decisions, legislative reports, etc.

The narrow tailoring requirement has been met through the satisfaction of five factors to ensure that the remedy “fits” the evidence:

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

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

² *Id.* at 509.

- The relationship of numerical benchmarks for government spending to the availability of minority- and women-owned firms and to subcontracting goal setting procedures.
- The congruence between the remedies adopted and the beneficiaries of those remedies.
- Any adverse impact of the relief on third parties.
- The duration of the program.³

In *Adarand v. Peña*,⁴ the Supreme Court extended the analysis of strict scrutiny to race-based federal enactments such as the Disadvantaged Business Enterprise (“DBE”) program for federally-assisted transportation contracts (which applies to RTA).⁵ Just as in the local government context, the national government must have a compelling interest for the use of race and the remedies adopted must be narrowly tailored to the evidence relied upon.

In general, courts 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.⁶ However, appellate courts, including the Seventh Circuit Court of Appeals, have applied strict scrutiny to the gender-based presumption of social disadvantage in reviewing the constitutionality of the DBE program.⁷ Therefore, we advise that RTA evaluate gender-based remedies under the strict scrutiny standard.

Classifications not based on race, ethnicity, religion, national origin or gender are subject to the lesser standard of review of “rational basis” scrutiny, because the courts have held there are no equal protection implications under the Fourteenth Amendment for groups not subject to systemic discrimination.⁸ In contrast to strict scrutiny of government action directed towards persons of “suspect classifications” such as racial and ethnic minorities, rational basis means the governmental action must only be “rationally related” to a “legitimate” government

³ *United States v. Paradise*, 480 U.S. 149, 171 (1987).

⁴ *Adarand v. Peña*, 515 U.S. 200 (1995).

⁵ 49 C.F.R. Part 26.

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

⁷ *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715, 720 (7th Cir. 2007) (“*Northern Contracting III*”).

⁸ [United States v. Carolene Products Co.](#), 304 U.S. 144 (1938).

interest. Thus, preferences for persons with disabilities, veterans, etc. may be enacted with vastly less evidence than race- or gender-based measures to combat historic discrimination.

Unlike most legal challenges, the defendant has the initial burden of producing “strong evidence” in support of a race-conscious program.⁹ 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.¹⁰ “[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.”¹¹ A plaintiff “cannot meet its burden of proof through conjecture and unsupported criticism of [the government’s] evidence.”¹² 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 highway contracts. Thus, they failed to meet their ultimate burden to prove that the DBE program is unconstitutional on this ground.”¹³ When the statistical information is sufficient to support the inference of discrimination, the plaintiff must prove that the statistics are flawed.¹⁴ A plaintiff cannot rest upon general criticisms of studies or other evidence; it must carry the case that the government’s proof is inadequate to meet strict scrutiny, rendering the legislation or governmental program illegal.¹⁵

⁹ *Aiken v. City of Memphis*, 37 F.3d 1155, 1162 (6th Cir. 1994).

¹⁰ *Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147, 1166 (10th Cir. 2000), cert. granted then dismissed as improvidently granted, 532 U.S. 941 (2001) (“*Adarand VII*”); *W.H. Scott Construction Co., Inc. v. City of Jackson, Mississippi*, 199 F.3d 206, 219 (5th Cir. 1999).

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

¹² *Concrete Works of Colorado, Inc. v. City and County of Denver*, 321 F.3d 950, 989, cert. denied, 540 U.S. 1027 (2003) (10th Cir. 2003) (“*Concrete Works III*”).

¹³ *Sherbrooke Turf, Inc. v. Minnesota Department of Transportation*, 345 F.3d 964, 970 (8th Cir. 2003), cert. denied, 541 U.S. 1041 (2004).

¹⁴ *Engineering Contractors II*, 122 F.3d at 916; *Coral Construction Co. v. King County*, 941 F.2d 910 921 (9th Cir. 1991).

¹⁵ *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); see also *Wygant v. Jackson Board of Education*, 476 U.S. 267, 277-278 (1986).

There is no need of formal legislative findings of discrimination,¹⁶ nor “an ultimate judicial finding of discrimination before [a local government] can take affirmative steps to eradicate discrimination.”¹⁷

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 programs to determine whether they are sufficiently narrowly tailored. The following is a detailed discussion of the parameters for conducting studies leading to defensible programs that can establish an agency’s compelling interest in remedying discrimination and developing narrowly tailored initiatives.

B. *City of Richmond v. J.A. Croson Co.*

The U.S. Supreme Court in the case of the *City of Richmond v. J.A. Croson Co.* established the constitutional contours of permissible race-based public contracting programs. Reversing long established law, 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 benefits these historic victims of discrimination. Strict scrutiny requires that a government entity prove both its “compelling interest” in remedying 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 that 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 country that was at least 51 percent owned and controlled by “Black, Spanish-speaking, Oriental, Indian, Eskimo, or Aleut” citizens was eligible to participate. The Plan was adopted after a public hearing at which no direct evidence was presented that the City had discriminated on the basis of race in awarding contracts or that its prime contractors had discriminated against minority subcontractors. The only evidence

¹⁶ *Webster*, 51 F.Supp.2d at 1364.

¹⁷ *Concrete Works III*, 36 F.3d at 1522.

before the City Council was: (a) Richmond’s population was 50 percent Black, yet less than one percent of its prime construction contracts had been awarded to minority businesses; (b) local contractors’ associations were virtually all White; (c) the City Attorney’s opinion that the Plan was constitutional; and (d) general 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 illegal conduct:

[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.¹⁸

Strict scrutiny of race-based remedies is required to determine whether racial classifications are in fact motivated by either notions of racial inferiority or blatant racial politics. This highest level of judicial review “smokes out” illegitimate uses of race by assuring that the legislative body is pursuing a goal important enough to warrant use of a highly suspect tool.¹⁹ It further ensures that the means chosen “fit” this compelling goal so closely that there is little or no possibility that the motive for the classification was illegitimate racial prejudice or stereotype. The Court made clear that strict scrutiny seeks to expose racial stigma; racial classifications are said to create racial hostility if they are based on notions of racial inferiority.²⁰

Race is so suspect a basis for government action that more than “societal” discrimination is required to restrain racial stereotyping or pandering. The Court provided no definition of “societal” discrimination or any guidance about how to

¹⁸ 488 U.S. at 491-92.

¹⁹ 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 decision maker for the use of race in that particular context.”).

²⁰ 488 U.S. at 493.

recognize the ongoing realities of history and culture in evaluating race-conscious programs. The Court simply asserted that:

[w]hile there is no doubt that the sorry history of both private and public discrimination in this country has contributed to a lack of opportunities for black entrepreneurs, this observation, standing alone, cannot justify a rigid racial quota in the awarding of public contracts in Richmond, Virginia.... [A]n amorphous claim that there has been past discrimination in a particular industry cannot justify the use of an unyielding racial quota. It is sheer speculation how many minority firms there would be in Richmond absent past societal discrimination.²¹

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 anti-discrimination ordinance. Finally, Richmond 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, whereas a local government is 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

²¹ *Id.* at 499.

impossible to say that the City has demonstrated “a strong basis in evidence for its conclusion that remedial action was necessary.”²²

The foregoing analysis was applied only to Blacks. The Court then emphasized that there was “absolutely no evidence” 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.”²³

Having found that Richmond had not presented evidence in support of its compelling interest in remedying discrimination—the first prong of strict scrutiny—the Court went on to make 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.²⁴ Further, Justice O’Connor rejected the argument that individualized consideration of Plan eligibility is too administratively burdensome.

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

Nothing we say today precludes a state or local entity from taking action to rectify the effects of identified discrimination within its jurisdiction. If the City of Richmond had evidence before it that non-minority contractors were systematically excluding minority businesses from subcontracting opportunities, it could take action to end the discriminatory exclusion. Where there is a significant statistical disparity between the number of qualified minority contractors willing and able to perform a particular service and the number of such contractors actually engaged by the locality or the locality’s prime contractors, an inference of discriminatory exclusion could arise. Under such circumstances, the City could act to dismantle the closed business system by

²² *Id.* at 510.

²³ *Id.*

²⁴ *See Grutter*, 529 U.S. at 336-337 (quotas are not permitted; race must be used in a flexible, non-mechanical way).

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.²⁵

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.²⁶ 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.²⁷

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

[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 number of minority-owned contractors in the Richmond

²⁵ 488 U.S. at 509 (citations omitted).

²⁶ *Id.* at 502.

²⁷ *See, e.g., Northern Contracting III*, 473 F.3d at 723.

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*.²⁸

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 subcontracting 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 CFR Part 26 "provides for a flexible system of contracting goals that contrasts sharply with the rigid quotas invalidated in *Croson*."²⁹

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. Strict Scrutiny as Applied to Federal Enactments

In *Adarand v. Peña*,³⁰ the Supreme Court again overruled long settled law and extended the analysis of strict scrutiny under the Due Process Clause of the Fourteenth Amendment to federal enactments. Just as in the local government context, when evaluating federal legislation and regulations:

[t]he strict scrutiny test involves two questions. The first is whether the interest cited by the government as its reason for injecting the consideration of race into the application of

²⁸ *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").

²⁹ *Western States Paving Co., Inc. v. Washington Department of Transportation*, 407 F.3d 983, 994 (9th Cir. 2005), cert. denied, 546 U.S. 1170 (2006).

³⁰ 515 U.S. 200 (1995) (*Adarand III*).

law is sufficiently compelling to overcome the suspicion that racial characteristics ought to be irrelevant so far as treatment by the government is concerned. The second is whether the government has narrowly tailored its use of race, so that race-based classifications are applied only to the extent absolutely required to reach the proffered interest. The strict scrutiny test is thus a recognition that while classifications based on race may be appropriate in certain limited legislative endeavors, such enactments must be carefully justified and meticulously applied so that race is determinative of the outcome in only the very narrow circumstances to which it is truly relevant.³¹

1. U.S. Department of Transportation's Disadvantaged Business Enterprise Program

To comply with *Adarand*, Congress reviewed and revised the Disadvantaged Business Enterprise (DBE) Program statute³² and implementing regulations³³ for federal-aid contracts in the transportation industry. The program governs RTA's receipt of federal funds from the Federal Transit Administration ("FTA"). To date, every court that has considered the issue has found the regulations to be constitutional on their face.³⁴ These cases provide important guidance to RTA about how to narrowly tailor a program. For example, the Fourth Circuit noted with approval that North Carolina's M/WBE program for state-funded contracts largely mirrored Part 26.³⁵

³¹ *Adarand Constructors, Inc. v. Peña*, 965 F. Supp. 1556, 1569-1570 (D. Colo. 1997), *rev'd*, 228 F.3d 1147 (2000) ("*Adarand IV*"); *see also Adarand III*, 515 U.S. at 227.

³² Transportation Equity Act for the 21st Century (TEA-21), Pub. L. No. 105-178 (b)(1), 112 Stat. 107, 113.

³³ 49 C.F.R. Part 26.

³⁴ *See, e.g., Adarand Constructors, Inc. v. Slater*, 228 F.3d 1147 (10th Cir. 2000) ("*Adarand VII*"), cert. granted then dismissed as improvidently granted, 532 U.S. 941, 534 U.S. 103 (2001); *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*").

³⁵ *H.B. Rowe Co. v. Tippett*, 615 F.3d 233, 236 (4th Cir. 2010).

All courts have held that Congress had strong evidence of widespread race discrimination in the construction industry.³⁶ Relevant evidence before Congress included:

- Disparities between the earnings of minority-owned firms and similarly situated non-minority-owned firms;
- Disparities in commercial loan denial rates between Black business owners compared to similarly situated non-minority business owners;
- The large and rapid decline in minorities' participation in the construction industry when affirmative action programs were struck down or abandoned; and
- Various types of overt and institutional discrimination by prime contractors, trade unions, business networks, suppliers, and sureties against minority contractors.³⁷

The Eighth Circuit Court of Appeals took a “hard look” at the evidence Congress considered, and concluded that the legislature had:

[S]pent 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.³⁸

³⁶ See also *Western States*, 407 F.3d at 993 (“In light of the substantial body of statistical and anecdotal material considered at the time of TEA-21’s enactment, Congress had a strong basis in evidence for concluding that—in at least some parts of the country—discrimination within the transportation contracting industry hinders minorities’ ability to compete for federally funded contracts.”).

³⁷ See *id.*, 407 F.3d at 992-93.

³⁸ *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

Next, the regulations were facially narrowly tailored. Unlike the prior program,³⁹ Part 26 provides that:

- The overall goal must be based upon demonstrable evidence of the number of DBEs ready, willing, and able to participate on the recipient's federally assisted contracts.
- The goal may be adjusted to reflect the availability of DBEs but for the effects of the DBE Program and of discrimination.
- The recipient must meet the maximum feasible portion of the goal through race-neutral measures as well as estimate that portion of the goal it predicts will be met through such measures.
- The use of quotas and set-asides is limited to only those situations where there is no other remedy.
- The goals are to be adjusted during the year to remain narrowly tailored.
- Absent bad faith administration of the Program, a recipient cannot be penalized for not meeting its goal.
- The presumption of social disadvantage for racial and ethnic minorities and women is rebuttable, "wealthy minority owners and wealthy minority firms are excluded, and certification is available to persons who are not presumptively disadvantaged but can demonstrate actual social and economic disadvantage."
- Exemptions and waivers from any or all Program requirements are available.⁴⁰

These elements have led the courts to conclude that the program is narrowly tailored on its face. First, the regulations place strong emphasis on the use of race-neutral means to achieve minority and women participation. Relying upon *Grutter v. Bollinger*, the Eighth Circuit held that while "[n]arrow tailoring does not require the exhaustion of every conceivable race-neutral alternative...it does require serious, good faith consideration of workable race-neutral alternatives."⁴¹

of the existence of a compelling interest in remedying the nationwide effects of past and present discrimination in the federal construction procurement subcontracting market.").

³⁹ 49 C.F.R. Part 23.

⁴⁰ *Sherbrooke*, 345 F.3d. at 973.

⁴¹ *Id.* at 972.

The DBE Program is also flexible. Eligibility is limited to small firms owned by persons whose net worth is under a certain amount.⁴² Further, the recipient may terminate race-conscious contract goals if it meets its annual overall goal through race-neutral means for two consecutive years. Moreover, the authorizing legislation is subject to Congressional reauthorization that will ensure periodic public debate.

The court next held that the goals are tied to the relevant labor market. “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*....”⁴³

Finally, Congress has taken significant steps to minimize the race-conscious nature of the Program. “[W]ealthy minority owners and wealthy minority-owned firms are excluded, and certification is available to persons who are not presumptively [socially] disadvantaged but can demonstrate actual social and economic disadvantage. Thus, race is made relevant in the program, but it is not a determinative factor.”⁴⁴

DBE programs based upon a methodology similar to that for this Study for RTA, including the availability analysis and the examination of disparities in the business formation rates and business earnings of minorities and women compared to similarly situated non-minority males, have been held to be narrowly tailored in their application of Part 26. For example, in upholding the Minnesota Department of Transportation’s DBE program using the same approach, the Eighth Circuit opined that while plaintiff attacked the study’s data and methods,

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

⁴² The personal net worth limit was \$750,000 when the DBE program regulations were amended to meet strict scrutiny in 1999. The limit was increased to \$1.32 million in 2012, and is now indexed by the Consumer Price Index. 49 C.F.R. § 26.67(b)(1).

⁴³ *Id.*

⁴⁴ *Id.* at 973.

use of race-conscious and race-neutral methods as the year progressed, as the DOT regulations require.⁴⁵

2. U.S. Department of Defense’s Small Disadvantaged Business Program

In 2008, the Federal Circuit Court of Appeals struck down the Department of Defense (DOD) program for Small Disadvantaged Businesses (SDBs) in *Rothe Development Corporation v. U.S. Department of Defense*.⁴⁶ The program set an overall annual goal of five percent for DOD contracting with SDBs and authorized various race-conscious measures to meet the goal.

In *Rothe VII*,⁴⁷ the appeals court held that the DOD program violated strict scrutiny because Congress did not have a “strong basis in evidence” upon which to conclude that DOD was a passive participant in racial discrimination in relevant markets across the country. The six local disparity studies upon which the DOD primarily relied for evidence of discrimination did not meet the compelling interest requirement, and its other statistical and anecdotal evidence did not rise to meet the heavy constitutional burden.

Of particular relevance to this report for RTA, the primary focus of the court’s analysis was the six disparity studies. The court reaffirmed that such studies are relevant to the compelling interest analysis.⁴⁸ It then rejected *Rothe*’s argument that data more than five years old must be discarded, stating, “We decline to adopt such a *per se* rule here.... [The government] should be able to rely on the most recently available data so long as that data is reasonably up-to-date.”⁴⁹

In the absence of expert testimony about accepted econometric models of discrimination, the court was troubled by the failure of five of the studies to account for size differences and “qualifications” of the minority firms in the denominator of the disparity analysis, or as the court labeled it, “relative

⁴⁵ *Id.*

⁴⁶ *Rothe Development Corporation v. U.S. Department of Defense*, 545 F.3d 1023 (*Fed. Cir.* 2008). We note that the jurisdiction of the Court of Appeals for the Federal Circuit is limited to the jurisdiction described in 28 U.S.C. §§ 1292 (c) and (d) and 1295. Pursuant to 28 U.S.C. § 1295(a)(2), jurisdiction in *Rothe* was based upon the plaintiff’s claim under the Tucker Act, 28 U.S.C. § 1346(a)(2), which governs contract claims against the United States.

⁴⁷ This opinion was the latest iteration of an 11-year-old challenge by a firm owned by a White female to the DOD’s award of a contract to an Asian American–owned business despite the fact that plaintiff was the lowest bidder.

⁴⁸ *Rothe*, 545 F.3d at 1037-1038.

⁴⁹ *Id.* at 1038-1039.

capacity.”⁵⁰ The court was concerned about the studies’ inclusion of possibly “unqualified” minority firms and the failure to account for whether a firm can perform more than one project at a time in two of the studies.⁵¹ In the court’s view, the combination of these perceived deficits rendered the studies insufficiently probative to meet Congress’ burden.

The appellate court ignored the analyses in the cases upholding the USDOT DBE Program and the City of Denver’s local affirmative action contracting program where the fallacy of “capacity” was debunked, all of which were cited extensively by the district court. It relied instead on a report from the United States Commission on Civil Rights, which adopts the views of anti-affirmative action writers, including those of Rothe’s consultant.⁵²

However, the court was careful to limit the reach of its review to the facts of the case:

To be clear, we do *not* hold that the defects in the availability and capacity analyses in these six disparity studies render the studies wholly unreliable for any purpose. Where the calculated disparity ratios are low enough, we do not foreclose the possibility that an inference of discrimination might still be permissible for *some* of the minority groups in *some* of the studied industries in *some* of the jurisdictions. And we recognize that a minority owned firm’s capacity and qualifications may themselves be affected by discrimination. But we hold that the defects we have noted detract dramatically from the probative value of these six studies, and, in conjunction with their limited geographic coverage, render the studies insufficient to form the statistical core of the “strong basis in evidence” required to uphold the statute.⁵³

The Federal Circuit concluded its analysis of compelling interest by “stress[ing] that [its] holding is grounded in the particular terms of evidence offered by DOD

⁵⁰ *Id.* at 1042.

⁵¹ *Ibid.*

⁵² U.S. Commission on Civil Rights, *Disparity Studies as Evidence of Discrimination in Federal Contracting* (May 2006): 79.

⁵³ *Rothe*, 545 F.3d at 1045.

and relied on by the district court in this case, and should not be construed as stating blanket rules, for example, about the reliability of disparity studies.”⁵⁴

Given the holding that Congress lacked a strong basis in evidence for the DOD program, the court did not rule on whether its provisions were narrowly tailored. The court did note, however, in its prior rulings that the program is flexible, limited in duration, and not unduly burdensome to third parties, and that the program has tended to narrow the reach of its remedies over time.⁵⁵

D. Narrowly Tailoring RTA’s Disadvantaged Business Enterprise Programs

Congress and the Illinois General Assembly have already determined that there is a compelling interest in adopting a DBE program for those respective funding sources. Therefore, RTA’s obligation is to ensure that its implementation of these statutory mandates is narrowly tailored.

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.⁵⁶

⁵⁴ *Id.* at 1049.

⁵⁵ *Id.* at 1049.

⁵⁶ *United States v. Paradise*, 480 U.S. 149, 171 (1987); *see also Sherbrooke*, 345 F.3d at 971-972.

It is imperative that remedies not operate as fixed quotas.⁵⁷ Programs that lack waivers for firms that fail to meet the subcontracting goals but make good faith efforts to do so have been struck down.⁵⁸ In *Croson*, the Court refers approvingly to the contract-by-contract waivers used in the DBE program.⁵⁹ This feature has been central to the holding that the DBE program meets the narrow tailoring requirement.⁶⁰

1. Set Narrowly Tailored Goals

a. Overall, Annual DBE Goals

49 C.F.R. Part 26 requires RTA to use a two-step goal setting process to establish its overall triennial DBE goal for FTA-funded contracts. The goal must be based upon the relative availability of DBEs and reflect the level of DBE participation that would be expected absent the effects of discrimination.⁶¹ Step 1 is to determine the base figure for DBE availability, and one approved method is to use data from a disparity study.⁶² Step 2 is to examine evidence available in the recipient's jurisdiction to determine whether to adjust the base figure. RTA must consider the current capacity of DBEs as measured by the volume of work DBEs have performed in recent years.⁶³ The agency may consider evidence from related fields such as statistical evidence of disparities in financing, bonding and insurance and data on employment, self-employment, etc.⁶⁴ "If you attempt to make an adjustment to your base figure to account for the continuing effects of past discrimination (often called the "but for" factor) or the effects of an ongoing DBE program, the adjustment must be based on demonstrable evidence that is logically and directly related to the effect for which the adjustment is sought"⁶⁵ The final result is to be expressed as a percentage of all FTA funds (exclusive of funds to be used for the purchase of transit vehicles). The "overall goals must

⁵⁷ See 49 C.F.R. § 26.43 (quotas are not permitted and set-aside contracts may be used only in limited and extreme circumstances "when no other method could be reasonably expected to redress egregious instances of discrimination").

⁵⁸ 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.").

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

⁶⁰ See, e.g., *Sherbrooke*, 345 F.3d at 972.

⁶¹ 49 C.F.R. § 26.45(b).

⁶² 49 C.F.R. § 26.45(c)(3).

⁶³ 49 C.F.R. § 26.45(d)(1)(i).

⁶⁴ 49 C.F.R. § 26.45(d)(2).

⁶⁵ 49 C.F.R. § 26.45(d)(3).

provide for participation by all certified DBEs and must not be subdivided into group-specific goals.”⁶⁶ Public participation and public notice are mandated.

Goal setting, however, is not an absolute science.⁶⁷ “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 *Croscon*.”⁶⁸

To perform Step 1—estimating the base figure of DBE availability—the study must conduct the following analyses. First, it must empirically establish the geographic and product dimensions of its contracting and procurement market area. This is a fact driven inquiry; it may or may not be the case that the market area is the government’s jurisdictional boundaries.⁶⁹ 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.⁷⁰ Likewise, the accepted approach is to analyze those detailed industries that make up at least 75 percent of the prime contract and subcontract payments for the Study period.⁷¹ Second, it must calculate the availability of DBEs in RTA’s market area.

b. Narrowly Tailored Contract Goals

In addition to the overall annual goal, RTA must set narrowly tailored goals on specific contracts where appropriate.

It is settled case law that goals for a particular solicitation should reflect the particulars of the contract, not reiterate annual aggregate targets. RTA must set contract goals must be based upon availability of DBEs to perform the anticipated scopes – including the work estimated to be performed by the prime firm – of the individual contract.⁷² Not only is contract goal setting legally mandated,⁷³ but this

⁶⁶ 49 C.F.R. § 26.45(h).

⁶⁷ In upholding New Jersey Transit’s DBE program, the court held that “Plaintiffs have failed to provide evidence of another, more perfect, method” of goal setting. *GEOD Corp. v. New Jersey Transit Corp.*, 2009 U.S. Dist. LEXIS 74120, at *20 (D. N.J. 2009).

⁶⁸ *Sherbrooke*, 345 F.3d. at 972.

⁶⁹ *Concrete Works II*, 36 F.3d at 1520 (to confine data to strict geographic boundaries would ignore “economic reality”).

⁷⁰ “*Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program*,” Transportation Research Board of the National Academy of Sciences, NCHRP Report, Issue No. 644, 2010, p. 49 (“National Disparity Study Guidelines”).

⁷¹ *Id.* at pp. 50-51.

⁷² 49 C.F.R. § 26.51(e)(2).

⁷³ *See id*; *Coral Construction*, 941 F.2d at 924.

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 unrealistic contract goals. While more labor intensive than defaulting to the annual, overall goals, there is no option to eschew narrowly tailoring program implementation because to do so would be more burdensome.

2. Apply Race- and Gender-Neutral Remedies to the Maximum Feasible Extent

The courts have held that race- and gender-neutral approaches are a necessary component of a defensible and effective DBE program,⁷⁴ and the failure to seriously consider such remedies has been fatal to several programs.⁷⁵ To implement this standard, RTA is required under the program regulations to meet the “maximum feasible portion” of its overall goal using race-neutral measures.⁷⁶

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 RTA 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.⁷⁷ Further, governments have a duty to ferret out and punish discrimination against minorities and women by their contractors, staff, lenders, bonding companies or others.⁷⁸

RTA must also estimate the portion of the goal it predicts will be met through race-neutral and race-conscious measures (*i.e.*, contract goals).⁷⁹ This

⁷⁴ *Croson*, 488 U.S. at 507 (Richmond considered no alternatives to race-based quota); *Philadelphia III*, 91 F.3d at 609 (City’s failure to consider race-neutral alternatives was particularly telling); *Webster*, 51 F.Supp.2d at 1380 (for over 20 years County never seriously considered race-neutral remedies); *cf. Aiken*, 37 F.3d at 1164 (failure to consider race-neutral method of promotions suggested a political rather than a remedial purpose).

⁷⁵ *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.

⁷⁶ 49 CFR § 26.51(a).

⁷⁷ *Id.*

⁷⁸ *Croson*, 488 U.S. at 503 n.3; *Webster*, 51 F.Supp.2d at 1380.

⁷⁹ 49 CFR § 26.45(f)(3).

requirement has been central to the holdings that the DBE regulations meet narrow tailoring.⁸⁰

One marker of the need to use contract goals to meet the annual goal is the results of solicitations without contract goals. This is excellent evidence of whether, in the absence of affirmative market intervention, DBEs would receive dollars in proportion to their availability. Courts have held that such outcomes are an excellent indicator of whether discrimination continues to impact opportunities in public contracting. Evidence of race and gender discrimination in relevant “unremediated”⁸¹ markets provides an important indicator of what level of actual DBE participation can be expected in the absence of goals.⁸² The court in the Chicago case held that the “dramatic decline in the use of M/WBEs when an affirmative action program is terminated, and the paucity of use of such firms when no affirmative action program was ever initiated,” was proof of the City’s compelling interest in employing race- and gender-conscious measures.⁸³

Narrow tailoring does not require that every race-neutral approach must be implemented and then proven ineffective before race-conscious remedies may be utilized.⁸⁴ 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.”⁸⁵

3. Ensure Flexible Goals and Requirements

It is imperative that remedies not operate as fixed quotas.⁸⁶ A DBE program must provide for contract awards to firms who fail to meet the contract goals but make

⁸⁰ See, e.g., *Sherbrooke*, 345 F.3d. at 973

⁸¹ “Unremediated market” means “markets that do not have race- or gender-conscious subcontracting goals in place to remedy discrimination.” *Northern Contracting II*, at *36.

⁸² See, e.g., *Western States*, 407 F.3d at 992 (Congress properly considered evidence of the “significant drop in racial minorities’ participation in the construction industry” after state and local governments removed affirmative action provisions).

⁸³ *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725, 737 (N.D. Ill. 2003); see also *Concrete Works IV*, 321 F.3d at 987-988.

⁸⁴ *Grutter*, 529 U.S. at 339.

⁸⁵ *Coral Construction*, 941 F.2d at 923.

⁸⁶ See 49 C.F.R 26.43 (quotas are not permitted and set-aside contracts may be used only in limited and extreme circumstances “when no other method could be reasonably expected to redress egregious instances of discrimination”).

good faith efforts to do so.⁸⁷ Further, firms that meet the goals cannot be favored over those who made good faith efforts. Part 26 contains extensive provisions regarding the standards and processes for establishing good faith efforts.⁸⁸ In *Croson*, the Court refers approvingly to these contract-by-contract waivers.⁸⁹ This feature has been central to the holding that the DBE program meets the narrow tailoring requirement.⁹⁰

4. Evaluate the Burden on Third Parties

Narrow tailoring requires that RTA evaluate whether the program unduly burdens non-DBEs.⁹¹ The burden of compliance need not be placed only upon those firms directly responsible for the discrimination. “Innocent” parties can be made to share some of the burden of the remedy for eradicating racial discrimination.⁹² 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.⁹³ “Implementation of the race-conscious contracting goals for which TEA-21 provides will inevitably result in bids submitted by non-DBE firms being rejected in favor of higher bids from DBEs. Although this places a very real burden on non-DBE firms, this fact alone does not invalidate TEA-21. If it did, all affirmative action programs would be unconstitutional because of the burden upon non-minorities.”⁹⁴

⁸⁷ 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.”).

⁸⁸ 49 C.F.R. § 26.53 and Appendix A.

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

⁹⁰ See, e.g., *Sherbrooke*, 345 F.3d. at 972.

⁹¹ See *Engineering Contractors Assoc. of South Florida, Inc. v. Metropolitan Dade County* (“*Engineering Contractors I*”), 943 F.Supp. 1546, 1581-1582 (S.D. Fla. 1996) (County chose not to change its procurement system).

⁹² *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 it [sic] has suffered anything more than minimal revenue losses due to the program.”).

⁹³ See, e.g., *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).

⁹⁴ *Western States*, 407 F.3d at 995.

To address this factor, the DBE regulations specifically provide that if a grantee determines that DBEs are “so overconcentrated in a certain type of work as to unduly burden the opportunity of non-DBE firms to participate in this type of work, you must devise appropriate measures to address this overconcentration.”⁹⁵

5. Regularly Review the Effects of the Program

The courts require that race-based programs must have duration limits and “not last longer than the discriminatory effects it is designed to eliminate.”⁹⁶ The DBE Program’s periodic review by Congress has been repeatedly held to provide adequate durational limits.⁹⁷ Further, RTA must submit regular reports to FTA and the General Assembly. If RTA determines it will exceed its goal, it must reduce or eliminate the use of contract goals to the extent necessary to ensure that their use does not result in exceeding the overall goal.⁹⁸

The legal test for data is the “most recent available data.”⁹⁹ How old is too old is not definitively answered, but RTA would be wise to conduct a study at least once every five or six years.

E. Cases from the Seventh Circuit Court of Appeals

Two cases from the circuit governing Illinois illustrate almost all of these principles, and have provided significant guidance to other circuits and agencies across the country.

1. *Builders Association of Greater Chicago v. City of Chicago*

The City of Chicago relied upon the types and quality of evidence discussed above in establishing its strong basis in evidence for its M/WBE program designed to remedy discrimination against Black-, Hispanic- and women-owned construction firms.¹⁰⁰ However, the program as implemented in 2003, which had not been reviewed since its inception in 1990, was not sufficiently narrowly tailored to meet strict constitutional scrutiny. The court stayed the final order

⁹⁵ 49 C.F.R. § 26.33(a).

⁹⁶ *Adarand III*, 515 U.S. at 238.

⁹⁷ *See Western States*, 407 F.3d at 995.

⁹⁸ 49 C.F.R. § 26.51(f)(2).

⁹⁹ *Rothe*, 545 F.3d at 1038-1039.

¹⁰⁰ *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725 (N.D. Ill. 2003).

against operation of the Program for construction contracts for six months, to permit the City to review the ruling and adopt a new program.¹⁰¹

The opinion first reviews the historical proof of discrimination against minorities, particularly Blacks, in the Chicago construction industry. While not legally mandated, Chicago was a segregated city and “City government was implicated in that history.” After the election of Harold Washington as the first Black mayor in 1983, several reports focused on the exclusion of minorities and women from City procurement opportunities as well as pervasive employment discrimination by City departments. Mayor Washington imposed an executive order mandating that at least 25 percent of City contracts be awarded to minority-owned businesses and 5 percent to women-owned businesses.

In response to *Croson*, Chicago commissioned a Blue Ribbon Panel to recommend an effective program that would survive constitutional challenge. Based upon the Panel’s Report, and 18 days of hearings with over 40 witnesses and 170 exhibits, Chicago adopted a new program in 1990 that retained the 25 percent MBE and 5 percent WBE goals; added a Target Market, wherein contracts were limited to bidding only by M/WBEs; and provided that larger construction contracts could have higher goals.

The court held that the playing field for minorities and women in the Chicago area construction industry in 2003 was still not level. The City presented a great amount of statistical evidence. Despite the plaintiff’s attacks about over-aggregation and disaggregation of data and which firms were included in the analyses, “a reasonably clear picture of the Chicago construction industry emerged... While the size of the disparities was disputed, it is evident that minority firms, even after adjustment for size, earn less and work less, and have less sales compared to other businesses.” That there was perhaps overutilization of M/WBEs on City projects was not sufficient to abandon remedial efforts, as that result is “skewed by the program itself.”

Further, while it is somewhat unclear whether disparities for Asians and Hispanics result from discrimination or the language and cultural barriers common to immigrants, there were two areas “where societal explanations do not suffice.” The first is the market failure of prime contractors to solicit M/WBEs for non-goals work. Chicago’s evidence was consistent with that presented of the

¹⁰¹ A similar suit was filed against Cook County’s Program, which was declared unconstitutional in 2000. *Builders Association of Greater Chicago v. County of Cook*, 123 F.Supp.2d 1087 (N.D. Ill. 2000); *aff’d*, 256 F.3d 642 (7th Cir. 2001). In contrast to the City of Chicago, Cook County presented very little statistical evidence and none directed towards establishing M/WBE availability, utilization, economy-wide evidence of disparities, or other proof beyond anecdotal testimony. It also provided no evidence related to narrow tailoring.

effects of the discontinuance or absence of race-conscious programs throughout the country. Not only did the plaintiff fail to present credible alternative explanations for this universal phenomenon, but also this result “follows as a matter of economics... [P]rime contractors, without any discriminatory intent or bias, are still likely to seek out the subcontractors with whom they have had a long and successful relationship... [T]he vestiges of past discrimination linger on to skew the marketplace and adversely impact M/WBEs disproportionately as more recent entrants to the industry... [T]he City has a compelling interest in preventing its tax dollars from perpetuating a market so flawed by past discrimination that it restricts existing M/WBEs from unfettered competition in that market.”¹⁰²

The judge also relied upon the City’s evidence of discrimination against minorities in the market for commercial loans. Even the plaintiff’s experts were forced to concede that, at least as to Blacks, credit availability appeared to be a problem. Plaintiff’s expert also identified discrimination against white females in one data set.

After finding that Chicago met the compelling interest prong, the court held that the City’s program was not narrowly tailored to address these market distortions and barriers because:

- There was no meaningful individualized review of M/WBEs’ eligibility;
- There was no sunset date for the ordinance or any means to determine a date;
- The graduation threshold of \$27.5M was very high and few firms have graduated;
- There was no personal net worth limit;
- The percentages operated as quotas unrelated to the number of available firms;
- Waivers were rarely granted;
- No efforts were made to impact private sector utilization of M/WBEs; and
- Race-neutral measures had not been promoted, such as linked deposit programs, quick pay, contract downsizing, restricting prime contractors’

¹⁰² *BAGC v. Chicago*, 298 F. Supp.2d at 738.

self-performance, reducing bonds and insurance requirements, local bid preferences for subcontractors and technical assistance.

Chicago is the only city ever to have received a stay to permit revision of its program to meet narrow tailoring. It amended its ordinance to meet the court's 2004 deadline and continues to implement M/WBE subcontracting goals without interruption.

2. *Northern Contracting, Inc. v. Illinois Department of Transportation*

In this challenge to the constitutionality of the DBE program, the Seventh Circuit Court of Appeals affirmed the district court's trial verdict that the Illinois Department of Transportation's application of Part 26 was narrowly tailored.¹⁰³ IDOT had a compelling interest in remedying discrimination in the market area for federally-funded highway contracts, and its DBE Plan was narrowly tailored to that interest and in conformance with the regulations.

To determine whether IDOT met its constitutional and regulatory burdens, the court reviewed the evidence of discrimination against minority and women construction firms in the Illinois area. IDOT had commissioned an Availability Study to meet Part 26's requirements. The IDOT Study included a custom census of the availability of DBEs in IDOT's market area, weighted by the location of IDOT's contractors and the types of goods and services IDOT procures. The Study estimated that DBEs comprised 22.77 percent of IDOT's available firms.¹⁰⁴ It next examined whether and to what extent there are disparities between the rates at which DBEs form businesses relative to similarly situated non-minority men, and the relative earnings of those businesses. If disparities are large and statistically significant, then the inference of discrimination can be made. Controlling for numerous variables such as the owner's age, education, and the like, the Study found that in a race- and gender-neutral market area the availability of DBEs would be approximately 20.8 percent higher, for an estimate of DBE availability "but for" discrimination of 27.51 percent.

In addition to the IDOT Study, the court also relied upon:

- An Availability Study conducted for RTA, the Chicago-area commuter rail agency;

¹⁰³ *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7th Cir. 2007) (7th Cir. 2007) ("*Northern Contracting III*"). Ms. Holt authored IDOT's DBE goal submission and testified as IDOT's expert witness at the trial.

¹⁰⁴ This baseline figure of DBE availability is the "Step 1" estimate U.S. DOT grant recipients must make pursuant to 49 CFR §26.45.

- Expert reports relied upon in *BAGC v. Chicago*;
- Expert reports and anecdotal testimony presented to the Chicago City Council in support of the City's revised M/WBE Procurement Program ordinance;
- Anecdotal evidence gathered at IDOT's public hearings on the DBE program;
- Data on DBE involvement in construction projects in markets without DBE goals;¹⁰⁵ and
- IDOT's "zero goal" experiment, where DBEs received approximately 1.5 percent of the total value of the contracts. This was designed to test the results of "race-neutral" contracting policies, that is, the utilization of DBEs on contracts without goals.

Based upon this record, the Court of Appeals agreed with the trial court's judgment that the Program was narrowly tailored. IDOT's plan was based upon sufficient proof of discrimination such that race-neutral measures alone would be inadequate to assure that DBEs operate on a "level playing field" for government contracts.

The stark disparity in DBE participation rates on goals and non-goals contracts, when combined with the statistical and anecdotal evidence of discrimination in the relevant marketplaces, indicates that IDOT's 2005 DBE goal represents a "plausible lower-bound estimate" of DBE participation in the absence of discrimination... Plaintiff presented no persuasive evidence contravening the conclusions of IDOT's studies, or explaining the disparate usage of DBEs on goals and non-goals contracts... IDOT's proffered evidence of discrimination against DBEs was not limited to alleged discrimination by prime contractors in the award of subcontracts. IDOT also presented evidence that discrimination in the bonding, insurance, and financing markets erected barriers to DBE formation and prosperity.

¹⁰⁵ *Northern Contracting III*, 473 F.3d at 719 ("Also of note, IDOT examined the system utilized by the Illinois State Toll Highway Authority, which does not receive federal funding; though the Tollway has a DBE goal of 15 percent, this goal is completely voluntary -- the average DBE usage rate in 2002 and 2003 was 1.6 percent. On the basis of all of this data, IDOT adopted 22.77 percent as its Fiscal Year 2005 DBE goal.").

Such discrimination inhibits the ability of DBEs to bid on prime contracts, thus allowing the discrimination to indirectly seep into the award of prime contracts, which are otherwise awarded on a race- and gender-neutral basis. This indirect discrimination is sufficient to establish a compelling governmental interest in a DBE program... Having established the existence of such discrimination, a governmental entity has a compelling interest in assuring that public dollars, drawn from the tax contributions of all citizens, do not serve to finance the evil of private prejudice.¹⁰⁶

3. Midwest Fence, Corp. v. U.S. Department of Justice, Illinois Department of Transportation and Illinois Tollway

Most recently, the challenge to the DBE regulations, IDOT's implementation of those regulations and its DBE program for state-funded contracts, and to the Illinois Tollway's¹⁰⁷ separate DBE program was rejected.¹⁰⁸

Plaintiff Midwest Fence is a fencing and guardrail contractor owned and controlled by White males. From 2006-2010, Midwest generated average gross sales of approximately \$18 million per year. It alleged that these programs fail to meet the requirement that they be based on strong evidence of discrimination, and that the remedies are neither narrowly tailored on their face or as applied. In sum, plaintiff's argument was that the agencies lacked proof of discrimination, and it bears an undue burden under the programs as a specialty trade firm that directly competes with DBEs for prime contracting and subcontracting opportunities.

The district court granted summary judgment in favor of all defendants on all claims. First, like every prior decision and for the same reasons, the judge held that Part 26 is facially constitutional. Second, IDOT's implementation of the federal regulations was narrowly tailored because it was in conformance with the regulations and its program for state-funded contracts, modeled on Part 26, was based upon ample evidence of discrimination as proved through several disparity studies over many years. Third, the Tollway's DBE program "substantially mirrors that of Part 26" and was based on studies similar to those relied upon by IDOT.

¹⁰⁶ *Northern Contracting II*, at *82 (internal citations omitted); see *Croson*, 488 U.S. at 492.

¹⁰⁷ The Tollway is authorized to construct, operate, regulate, and maintain Illinois' system of toll highways. The Tollway does not receive any federal funding to accomplish its goals.

¹⁰⁸ *Midwest Fence, Corp. v. USDOT et al.*, 2015 WL 1396376 (N. D. Ill. March 24, 2015).

Midwest's main objection to the defendants' evidence was that it failed to account for "capacity" when measuring DBE availability and underutilization. However, as is well established, "Midwest would have to come forward with "credible, particularized evidence" of its own, such as a neutral explanation for the disparity, or contrasting statistical data. [citation omitted] Midwest fails to make this showing here."¹⁰⁹ Midwest offered only conjecture about how the defendants' studies supposed failure to account for capacity may or may not have impacted the studies' results. Plaintiff "fail[ed] to provide any independent statistical analysis or other evidence demonstrating actual bias."¹¹⁰

Turning to the Tollway's program, the court found its

method of goal setting is identical to that prescribed by the Federal Regulations, which this Court has already found to be supported by "strong policy reasons." [citation omitted] Although the Tollway is not beholden to the Federal Regulations, those policy reasons are no different here... [W]here the Tollway Defendants have provided persuasive evidence of discrimination in the Illinois road construction industry, the Court finds the Tollway Program's burden on non-DBE subcontractors to be permissible... The Tollway's race-neutral measures are consistent with those suggested under the Federal Regulations. *See*, 49 U.S.C. § 26.51. The Court finds that the availability of these programs, which mirror IDOT's, demonstrates 'serious, good faith consideration of workable race-neutral alternatives.' [citations omitted] In terms of flexibility, the Tollway Program, like the Federal Program, provides for waivers where prime contractors are unable to meet DBE participation goals, but have made good faith efforts to do so... Because the Tollway demonstrated that waivers are available, routinely granted, and awarded or denied based on guidance found in the Federal Regulations, the Court finds the Tollway Program sufficiently flexible. Midwest's final challenge to the Tollway Program is that its goal-setting process is "secretive and impossible to scrutinize." [reference omitted] However, the Tollway has plainly laid

¹⁰⁹ *Id.* at *17.

¹¹⁰ *Id.* at *18.

out the two goal-setting procedures it has employed since the program's enactment... The Tollway Defendants have provided a strong basis in evidence for their DBE Program. Midwest, by contrast, has not come forward with any concrete, affirmative evidence to shake this foundation.¹¹¹

The Seventh Circuit Court of Appeals affirmed.

¹¹¹ *Id.* at *22-23.

III. RTA's Disadvantaged Business Enterprise Program

This Chapter describes RTA's Disadvantaged Business Enterprise ("DBE") Program for federal-aid and locally-funded contracts.¹¹² The implementation of the DBE program for both funding sources for contracts is treated similarly. We therefore refer to the DBE program.

A. Elements of RTA's Disadvantaged Business Enterprise Program

As a recipient of US Department of Transportation ("USDOT") funds through the Federal Transit Administration ("FTA"), RTA is required as a condition of receipt to implement a DBE program in compliance with 49 C.F.R. Part 26.¹¹³ In brief summary, RTA must:

- Keep and report various data to USDOT, including the utilization of DBEs on its federal-aid contracts and create a bidders list of all firms bidding to RTA as prime contractors and firms bidding to those prime contractors as subcontractors.¹¹⁴
- Adopt a non-discrimination policy statement.¹¹⁵
- Appoint a DBE Liaison Officer ("DBELO"), with substantial responsibilities and direct reporting to the chief executive office of the agency.¹¹⁶ RTA's DBE program is administered by the Law Department. RTA's Regulatory Compliance Office ("RCO") is the designated DBELO.
- Make efforts to utilize DBE financial institutions.¹¹⁷
- Adopt a prompt payment mechanism for its prime contractors and for the prompt payment of subcontractors by prime contractors.¹¹⁸

¹¹² The Regional Transportation Authority Act, 70 ILCS/3615/2.31 established a DBE program for the Authority and the Service Boards (the Chicago Transit Authority, Metra, and Pace) for contracts not covered under the federally mandated DBE Program. The agencies must develop narrowly tailored DBE goals, monitor contractors' compliance and submit annual reports to the General Assembly.

¹¹³ 49 C.F.R. §§ 26.3 and 26.21.

¹¹⁴ 49 C.F.R. § 26.11.

¹¹⁵ 49 C.F.R. § 26.23.

¹¹⁶ 49 C.F.R. § 26.25.

¹¹⁷ 49 C.F.R. § 26.27.

¹¹⁸ 49 C.F.R. § 26.29.

- Create and maintain a DBE directory.¹¹⁹ RTA is a member of the Illinois Unified Certification Program (“ILUCP”). It does not conduct DBE certifications itself.¹²⁰
- Address possible overconcentration of DBEs in certain types of work.¹²¹
- Include elements to assist small businesses, such as unbundling contracts.¹²²

RTA is required to submit to FTA a triennial DBE goal in accordance with 49 C.F.R. § 26.45. RTA’s current FTA-approved DBE goal is 19.0 percent, with 17 percent projected to be met through the use of DBE contract goals and 2.0 percent to be met through race-neutral measures.

RTA conducts various types of outreach to DBEs and other small firms, such as attendance at stakeholder groups’ meetings and conferences. It is an active participant in the annual Transportation Symposium conducted by the Chicago area transportation agencies, where DBEs and other small businesses participate in seminars and network with agency officials and other prime contractors and businesses.

RTA has developed procedures, forms and other documents to implement the program and assist interested firms to participate on RTA’s contracts. Appendix A to RTA’s contract solicitation specifications provides instructions for completing the DBE Compliance Plan, as well as information on the Program and resources for vendor compliance.

To determine whether to set a DBE goal on a particular contract, RTA’s Project Manager (“PM”) completes a DBE Opportunities Worksheet, in collaboration with procurement staff, as necessary. This worksheet provides:

- A description of the project;
- Possible portions of the scope of work that could be subcontracted to DBEs or non-DBEs;
- The estimated total subcontractable percentage of the contract; and the
- The estimated percentage of total subcontractable dollars.

¹¹⁹ <http://www.idot.illinois.gov/doing-business/certifications/disadvantaged-business-enterprise-certification/il-ucp-directory/index>.

¹²⁰ 49 C.F.R. § 26.31.

¹²¹ 49 C.F.R. § 26.33.

¹²² 49 C.R.F. § 26.39.

To complete this worksheet, the RCO provides:

- Possible DBEs to solicit as prime contractors;
- A determination whether there are at least two DBEs available to perform each subcontractable scope; and
- A DBE goal for the contract, if appropriate.

If a DBE contract goal is established in the solicitation, the DBE Compliance Plan documentation must be completed and submitted with the proposal. The RCO reviews all proposals in response to a solicitation with a DBE goal to determine responsiveness. To be deemed responsive, proposers must either meet or exceed the DBE contract goal or show Good Faith Efforts (“GFEs”) to do so, as define in Part 26. The RCO verifies that all required forms in the DBE Compliance Plan are completed and signed. The forms must contain the following information:

- Names and addresses of DBEs that will participate on the project.
- Total proposed contract dollar amount and the dollar amount of each proposed subcontract.
- Signed Letter(s) of Intent reflecting the proposer’s commitment to use DBE subcontractor(s) along with a description of the work each DBE will perform.
- Signed Attestation and Affidavit.

If the required documentation is not completed properly, the RCO will work with the Procurement Department and/or the proposer for an explanation and/or to provide further documentation.

To facilitate compliance, RTA provides a checklist to explain the standards for counting DBE participation towards a contract goal and to ensure that the DBE subcontractor is performing a “commercially useful function.” A workflow sheet is used to make sure all program elements are followed and all forms and required clauses are included. Prime vendors must submit invoices, subcontractor payment logs, and proof of DBE payments.

If the proposer did not succeed in meeting the DBE goal, the proposer is required to submit a request for a GFE determination and must provide adequate documentation of its efforts to meet the goal. Failure to do so will render the submission non-responsive.

The RCO reviews the GFE documentation to determine whether the DBEs listed on the GFE log are certified and whether the proposer made adequate GFEs to locate ready, willing and able DBEs. GFE documentation typically includes the following information:

- All required GFE forms in the DBE Compliance Plan.
- Copies of all written communications with DBEs.
- A statement listing dates that DBEs were contacted via telephone and the result of each contact.
- A statement listing the dates the DBEs were contacted by means other than telephone and the result of the each contact.
- A statement setting forth the facts with respect to each DBE bid received and the reason(s) any such bid was declined.
- A statement setting forth the date that calls were made to the RTA and other assist organizations seeking DBE referrals and the result of each call.
- Any information of a similar nature relevant to the GFE requirements as outlined in the DBE Compliance Plan.

In reviewing the submitted documentation, the RCO takes into account the specific actions taken in attempting to achieve the DBE goal as described in Appendix A to Part 26. The RCO may contact the proposer for further information, if necessary. The RCO then will make a determination of whether the GFEs were made.

If a proposal is deemed non-responsive for failure to meet the DBE requirements, the RCO will notify the proposer of the non-responsive determination and provide information on requesting administrative reconsideration. All notifications and determinations must be finalized before the contract is awarded.

If a DBE goal is included on the vendor's contract, the PM and the RCO are responsible for monitoring progress towards meeting the goal and compliance with the Program during the life of the contract. The PM documents all communications as well as notifies the RCO. The PM maintains an ongoing record of progress reports and invoiced amounts for the prime vendor and DBE subcontractor, as well as a running total for the contract. The PM verifies the accuracy of the auditor's/RCO quarterly reports of the amounts actually paid to the prime firm and DBE subcontractor(s).

If the vendor falls behind on its DBE commitment, it must provide a written explanation to the RCO. If a DBE is unable or unwilling to perform the allocated

work, the contractor should inform the PM. The PM must inform the contractor of its responsibility to make GFEs to meet the DBE goal on the contract. If the contractor will not meet the DBE goal, the RCO will direct the PM and/or contractor to review its DBE goal attainment progress, provide a corrective action plan to meet the goal or provide justification of its GFEs to do so and why the DBE goal cannot be met.

The RCO will review a request for a contract amendment to verify how and whether the amendment (*e.g.*, adjusted scope or work) will impact DBE subcontracted items and achievement of the goal. If DBE subcontracted items are modified, the RCO may modify the goal accordingly. Whether a modification of the goal is warranted or not, the RCO then verifies that the Contractor is aware and has taken measures to ensure that it will meet the original or modified DBE goal.

As required by 49 C.F.R. § 26.39, RTA implements the following strategies to foster small business participation:

- Each year, the DBELO establishes a race-neutral small business participation goal.
- The RTA annually provides a reasonable number of prime contracts available for small business, and as part of the procurement process, PMs are required to identify whether the contract can be performed by a small business as the prime contractor. The contract may then be set aside solely for performance by small businesses.
- As part of the procurement process, PMs provide a list of small businesses that could work on the project as either a prime contractor or subcontractor.
- RTA performs outreach to certified small businesses active in the State of Illinois' Small Business Set Aside Program.
- If a DBE contract goal is not established because DBEs are not available but subcontracting opportunities exist, bidders may be required to commit to small business subcontractors or show good faith efforts to do so.
- When possible, the Procurement Division relaxes liability insurance requirements for small businesses.
- RTA educates project managers on the importance of small business participation and encourages the use of small businesses on RTA contracts

- The RCO and the Procurement Division provide regular updates on the progress of the program to the Executive Director.

B. Experiences with RTA's DBE Program

To explore the impacts of RTA's race- and gender-neutral contracting policies and procedures and the implementation of its DBE programs, we interviewed 26 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. Access to information and networks

Some participants reported it was difficult to access information about RTA projects or to know whom to contact at the agency to present credentials.

[RTA is] less transparent than most other agencies in terms of the procurement process.... Would be nice just to be able to see more of what's coming up and what's going on. It's pretty clouded.

2. Project Qualifications and Evaluations

Many minority and women interviewees reported that RTA's project managers prefer to work with large established firms and often discount the capabilities of DBEs.

People here have a level of confidence with the big firms that they don't have with the small ones.

Being on the other side [as an agency employee] before, where things are evaluated, it just doesn't seem sometimes that it is always fairly evaluated.

In terms of experience, we have the same experience like the big companies. We come from big companies.

The small firms sometimes will write good proposals. Because of the name, the others prefer to give it to the big companies..... [Even] if the [large firm's] staff is somewhere else, although we have the same experience or similar experience, in the evaluation process it always goes to the big companies.

There is human nature that you're going to go to the Sidley Austin or the McKenzie or the Econ. Just all of the names.... That's one of the hardest obstacles to overcome in terms of minority and women and small businesses.

They're looking at [large firms] as safe, safe, safe, safe, but really they're not. Yes, it's very safe and you end up not getting good value for your money.

3. Contract Size and Complexity

The size and complexity of RTA's projects was an impediment to all small firms' participation. Prime contracts were especially difficult to obtain.

It's a vicious circle. The requirement is qualifications and because you don't do the work as a [prime] company you don't have qualifications so you never get there.

To get those projects, you have to go through big companies, primes. Most of the time they already have their own friends that they've already built a relationship for a long time.... It's going to be a barrier. There is no dynamic relationship between small companies, small firms and RTA.

"Unbundling" contracts into smaller scopes or smaller dollar values to increase DBEs' abilities to obtain prime and subcontract work was recommended as one means to reduce barriers. Unbundling is also an element of RTA's FTA-approved small business element under the DBE regulations at 49 C.F.R. § 26.39.

[Projects should be] broken down for small [firms]. That would give us a big opportunity for us to compete.

A small business set aside on a race- and gender-neutral basis was another prescription for opening up opportunities for DBEs and other small firms.

That would create opportunities for people like you, and people like us, to do some real meaningful work.

Set aside projects or proposal for specific tasks. That would give us [an] opportunity to apply for those projects.

A small business setaside was also a way to deflect the ire of prime consulting firms, with whom DBEs will need to continue to work as subconsultants.

You will win one and you will get retribution.... That's why I think sometimes set asides for projects that are for unbundled, like Tollway does [are good].... You can grow without that retribution.... It's almost like they have a sense of entitlement. Like a sense of entitlement like those are their projects and how dare you go after their work. In the end, we also are bidding with them on other projects.

You really hurt [prime consultants] or upset them by going after their area, but as we grow, we go after bigger projects so it is a natural evolution.

When you go out and branch out on your own and you go after larger opportunities because you are competent to go after them and you're now bidding against them and now in competition with them, is more like how dare you step out of your place. That's not what you are. You are to serve my purpose, which is for me to have some participation so I can get this contract. When project owners stop being so hesitant to try out their larger projects or their more high profile projects on the DBE firms, then they will change the perception, but it really starts with them.

One prime consultant supported the use of a small business aside method to reduce the pressure on overall agency goals to be met mostly through subcontracting.

If you were to take something like that, about \$1 million or somewhere in that area, looking at the agency's overall goal, if it's 20% with the hopes that in that small business category you are going to get a DBE, that means that maybe they will be putting a lower goal on projects or a few projects that wouldn't carry a goal which could make it a little more palatable for the big primes.

4. RTA's Outreach Efforts to DBEs

Several participants reported that it was often difficult to access information about RTA's contracting opportunities. While the Annual Transit Symposium sponsored

by the Chicago area transportation agencies is helpful, several owners urged RTA to perform its outreach for its own projects to connect DBEs with prime vendors and RTA staff.

The RTA does participate in a few events through the year, and is a participant in the Symposium. They don't do a standalone get together like in a room like this.

This agency doesn't seem to have the commitment to diversity that the other [Chicago area] transportation agencies have.... The other agencies do outreach events. They make a point of getting to know the DBE community. They sponsor networking events. They do the outreach. This organization does not. So, they don't have the opportunity to get to know DBE members. That would be a good first step is just trying to make the connections between them, their staff, and the DBE community. Now I think that they look at prime and they don't even know who the DBE subs are.

5. Meeting DBE Contract Goals

There was strong support for the DBE program from prime contractors and consultants. Most prime firms were able to meet the contract goals.

To have partners that could be good WBEs and MWBEs would be very valuable.... When you do find a good partner, you really do make them a partner. They do a good job. They're above board. They have no problem with all the reporting that we need done. They have no problem getting the certificates and things like that.

Did it add time to our process? Sure. Is it the right thing to do? Yes.

The goal is to get the minority subcontractors that go from one level to the next and eventually graduate from the program.

Some have used DBEs outside of RTA contracts.

We've worked with them before. We'll probably work with them again.

Given the specialized nature of RTA's projects, some prime vendors found it to difficult to find DBEs.

It's hard for us to find [certified] people who have the same skillset that we need.... We've found a vendor who we've been able to get certified DBE that actually works in our space.... It's not a lot of great options on the list currently for us to tap into.

I think part of it is also looking at the contract requirements and the insurance requirements of project [to facilitate DBE participation].

Where a good-faith effort comes into play ... [is when] there's just literally not enough capacity because there's very specific roles on a very specific job. We make sure we've every effort to contact everyone we can think of, bring them in, try to convince them to bid, document all that and then submit a good-faith effort if we have to, if we feel we truly exhausted every avenue to meet the goal and aren't able to do it then we submit documentation proving that.

Others found it challenging to meet their DBE commitments because of the requirements of particular projects.

We have only been given one task [on a RTA contract] and it's so small that only I worked on it. We have already brought up to them that it's going to be a struggle for us to meet [our] DBE [goal] if that's how the tasks are going to be divvied out to us under that contract.

What was unfortunate here [was] we restocked a number of DBEs and WBEs and they were hoping to potentially get some work and there really wasn't truly work there.

Making it easier to find qualified DBEs was a repeated request.

Provide a good list of qualified vendors and set a realistic expectation.

Searching the list could be easier. It's just a lot of time going through and figuring out who would even belong to

the categories, figuring out what the categories code numbers were, so we could search by code.

Several prime consultants and contractors commented that RTA needs a more targeted contract goal setting procedure.

The DBE goal should be based upon the availability of people and the task.

While the prime firms generally met their contract goals, several DBEs reported that even the use of contract goals does not always foster opportunities for DBEs to perform as subconsultants.

This was the first year they have invited us to present at the board meeting to be part of the team and be represented there. We still don't have the opportunity to actually manage a section, a portion of the work ... but I hope that is coming in the future.

When people don't have to follow the rules, because they are bigger than you, [then] they are bullies. We have no other options. We need to be able to go to a CTA or METRA, RTA and complain.

The DBE contract goal was perceived by DBEs to be the ceiling, not the floor, for their subcontracting participation.

[Prime vendors] never give you more than what the goal is.

No company gives more than the percentage required.

RTA's DBE goals are very low compared with other agencies. CTA, the Tollway, IDOT will attempt to put out something in the 20 to 30% range. RTA is more often 10%, or even less. It's very difficult to give a piece of meaningful work for a 10% share. Particularly on planning jobs, or other kinds of things, which have smaller budgets. If it's a \$75,000 planning study, and you're getting 10% of it, that's not a meaningful amount of work to be done. It's just not a role that you can do with professionals really. We end up doing traffic counts or some kind of data collection.

Some DBEs had been substituted or dropped from contracts in other DBE programs, and cautioned that RTA must be vigilant to ensure compliance with contractual commitments to DBEs.

Replacing my people with people from other organizations who don't have anywhere near the technical competence or experience.... I wasn't allowed to speak to the owner.

Who do you go and complain to?

They should at least call and bring everybody into the room and find out what is going on.

A prime kept on calling us every six month ... but never using us for his work. They kept on saying there is just no work right now at IDOT.... I have friends at IDOT and started asking them and they said no, that's not what they are saying, they are saying you have no capacity or capabilities and I was like, are you kidding me?... [IDOT's project manager responded] "Oh, well, I trust the prime, I trust them that they are telling me the truth," so he will just sign the waiver and say okay.... Until I went through the other [political] door ... this would have gone on forever and then we actually came back on a new bid and we went after it as a prime ourselves and won it.... I do blame [IDOT's] project manager that he didn't do that investigation but I think he kind of felt like, I don't want to rock the boat, either.

RTA's efforts were in sharp contrast.

[The prime consultant] didn't use us as much as we were supposed to and I got a call [from RTA] on that. They didn't use you. They said they'd use for this and that, they only gave you that amount, are you okay with it? They did follow up on that.

6. Contract compliance monitoring

An electronic monitoring system similar to those in use by other Chicago area governments was one way to ensure compliance with the DBE program and prompt payment requirements.

[The B2GNow electronic system] It's a little overwhelming when you first use it. Once you kind of know what to click through to get to it, monthly now, it's an easy process.... You manage your percentage rate right there.

I think when you work with a lot of different organizations or municipalities, it is nicer to have one spot to go to, I would think in some way, rather than learning different programs. Gosh, what do I do for Metra? What do I do for PACE? What do I do for the city? It's all different.

With the electronic reporting, I think that it's working as a G[eneral] C[ontractor] and I monitor the system so I can see when our DBE subcontractors or minority subcontractors are receiving payment. Sometimes, though, what I find is that it's hard getting the subcontractors to go into the system to accept the payment. You know, they got the check that's all they're worried about. Other than that, it works well. It allows you to keep up with where you are as far as your commitment is concerned on the contract. If you fall short, it's a certain color. If you're ahead, it's a certain color. Again, if you fall short, the representative of the agency they're going to go, hey I noticed, because they're supposed to be doing the same thing I'm doing, monitoring the system. Making sure that prompt payment is happening.

C. Conclusion

The program review and the business owner and stakeholder interviews suggest that RTA is implementing the program in conformance with the requirements of Part 26. However, several enhancements will make it more effective. These include additional networking, outreach and matchmaking efforts; reducing contract size and complexity, where appropriate; setting aside contracts for small firms; implementing an electronic contract data collection and monitoring system; and setting more narrowly tailored contract goals.

IV. Utilization and Availability Analysis for RTA

A. Contract Data Sources and Sampling Method

We analyzed contract data for 2009 through 2013 for RTA. The Final Contract File for analysis contained a total award amount of \$49,103,101. The Final Contract Data File for analysis of FTA-assisted contracts contained 5 prime contracts with a total paid amount of \$1,246,962; of this amount, 7 associated subcontracts received \$82,085. The Final Contract Data File for analysis of non-federally-assisted contracts contained 68 prime contracts with a total paid amount of \$41,333,884; of this amount, 24 associated subcontracts received \$6,440,170. The Final Contract Data File was used to determine the geographic and product markets for the Study, to estimate the utilization of DBEs on those contracts, and to calculate DBE availability in RTA's marketplace.

Because RTA must set its triennial overall DBE goal based on the FTA-assisted dollars it receives, we present data separately for FTA-funded contracts and non-FTA-funded contracts.

B. RTA's Federally-Assisted Contracts

A defensible availability study must determine empirically the industries that comprise the agency's product or industry market for its locally funded contracts. The DBE regulations governing RTA's federally-assisted contracts likewise require this type of analysis.¹²³ The accepted approach is to analyze those detailed industries, as defined by 6-digit North American Industry, Classification System ("NAICS") codes¹²⁴ that make up at least 75 percent of the prime contract and subcontract payments for the study period.¹²⁵

During the study period, however, RTA only let 5 federally-assisted contracts. The small number of contracts had two impacts on the Study methodology. First, all NAICS codes represented in the federally-funded subset of the agency's Final Contract Data File were deemed in the agency's product market area; second, since all contracts were to be examined, there was no need initially to constrain this product market by geography. Tables 4.1 through 4.3 present the NAICS codes for RTA's federally-funded contracts disaggregated by level of contract

¹²³ 49 C.F.R. § 26.45.

¹²⁴ www.census.gov/eos/www/naics.

¹²⁵ "Guidelines for Conducting a Disparity and Availability Study for the Federal DBE Program," Transportation Research Board of the National Academy of Sciences, NCHRP Report, Issue No. 644, 2010, pp. 50-51 ("National Disparity Study Guidelines").

(i.e., was the firm receiving the contract as a prime vendor or a subcontractor), the label for each NAICS code, and the industry percentage distribution of spending across NAICS codes and funding source.

**Table 4.1 Industry Percentage Distribution of Contracts by Dollars Paid,
Federal Funds
All Contracts**

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
511210	Software Publishers	41.83%	41.83%
541613	Marketing Consulting Services	36.95%	78.79%
541611	Administrative Management and General Management Consulting Services	11.53%	90.31%
541511	Custom Computer Programming Services	3.95%	94.26%
541910	Marketing Research and Public Opinion Polling	2.26%	96.52%
541512	Computer Systems Design Services	1.93%	98.44%
541840	Media Representatives	1.35%	99.80%
323114	Commercial printing (except screen and books)	0.20%	100.00%

Source: CHA analysis of RTA data.

**Table 4.2 Industry Percentage Distribution of Contracts by Dollars Paid,
Federal Funds
Prime Contracts**

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
511210	Software Publishers	44.59%	44.59%
541613	Marketing Consulting Services	38.93%	83.52%
541611	Administrative Management and General Management Consulting Services	12.27%	95.79%

541511	Custom Computer Programming Services	4.21%	100.00%
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Source: CHA analysis of RTA data

**Table 4.3 Industry Percentage Distribution of Contracts by Dollars Paid,
Federal Funds
Subcontracts**

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
541910	Marketing Research and Public Opinion Polling	36.55%	36.55%
541512	Computer Systems Design Services	31.18%	67.73%
541840	Media Representatives	21.92%	89.65%
541613	Marketing Consulting Services	6.87%	96.52%
323114	Commercial printing (except screen and books)	3.30%	99.82%
541611	Administrative Management and General Management Consulting Services	0.18%	100.00%

Source: CHA analysis of RTA data

1. Utilization of DBEs on Federally-Assisted Contracts

Table 4.4 presents data on the total contract dollars paid by RTA for each NAICS code and the share the contract dollars comprise of all industries, for federally-assisted contracts. It is important to note the contract dollar shares are equivalent to the *weight* of each NAICS code spending. These weights were used to transform data from *unweighted* availability to *weighted* availability.

**Table 4.4 NAICS Code Distribution of Contract Dollars
Federal Funds**

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
511210	Software Publishers	556,004.62	41.83%
541613	Marketing Consulting Services	491,109.50	36.95%

541611	Administrative Management and General Management Consulting Services	153,192.16	11.53%
541511	Custom Computer Programming Services	52,440.00	3.95%
541910	Marketing Research and Public Opinion Polling	30,000.00	2.26%
541512	Computer Systems Design Services	25,593.80	1.93%
541840	Media Representatives	17,995.00	1.35%
323114	Commercial printing (except screen and books)	2,712.00	0.20%
Total		1,329,047.08	100.00%

Source: CHA analysis of RTA data.

Tables 4.5a through 4.5d also present the paid contract dollars (total dollars and share of total dollars) by NAICS codes for all industries, for federally-assisted contracts, this time disaggregated by race and gender.

Table 4.5a Distribution of Contract Dollars by Race and Gender
Federal Funds,
(total dollars)

NAICS	Black	Hispanic	Asian	Native American	White Women	Non-DBE
323114	2,712.00	0.00	0.00	0.00	0.00	0.00
511210	0.00	0.00	0.00	0.00	0.00	556,005.00
541511	0.00	0.00	0.00	0.00	0.00	52,440.00
541512	0.00	0.00	0.00	0.00	25,594.00	0.00
541611	145.00	0.00	0.00	0.00	0.00	153,047.00
541613	0.00	0.00	0.00	0.00	5,639.00	485,470.00
541840	0.00	17,995.00	0.00	0.00	0.00	0.00
541910	30,000.00	0.00	0.00	0.00	0.00	0.00

Total	32857.00	17,995.00	0.00	0.00	31,233.00	1,246,962.00
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Source: CHA analysis of RTA data.

Table 4.5b Distribution of Contract Dollars by Race and Gender

Federal Funds

(share of total dollars)

NAICS	Black	Hispanic	Asian	Native American	White Women	Non-DBE
323114	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
511210	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
541511	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
541512	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
541611	0.09%	0.00%	0.00%	0.00%	0.00%	99.91%
541613	0.00%	0.00%	0.00%	0.00%	1.15%	98.85%
541840	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%
541910	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	2.47%	1.35%	0.00%	0.00%	2.35%	93.82%

Source: CHA analysis of RTA data.

Table 4.5c Distribution of Contract Dollars by Race and Gender

Federal Funds,

(total dollars)

NAICS	DBE	Non-DBE	TOTAL
323114	2,712.00	0.00	2,712.00
511210	0.00	556,005.00	556,005.00
541511	0.00	52,440.00	52,440.00
541512	25,594.00	0.00	25,594.00
541611	145.00	153,047.00	153,192.00
541613	5,639.00	485,470.00	491,110.00
541840	17,995.00	0.00	17,995.00
541910	30,000.00	0.00	30,000.00

Total	82,085.00	1,246,962.00	1,329,047.00
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Source: CHA analysis of RTA data.

**Table 4.5d Distribution of Contract Dollars by Race and Gender
Federal Funds,
(share of total dollars)**

NAICS	DBE	Non-DBE	TOTAL
323114	100.00%	0.00%	100.00%
511210	0.00%	100.00%	100.00%
541511	0.00%	100.00%	100.00%
541512	100.00%	0.00%	100.00%
541611	0.09%	99.91%	100.00%
541613	1.15%	98.85%	100.00%
541840	100.00%	0.00%	100.00%
541910	100.00%	0.00%	100.00%
Total	6.18%	93.82%	100.00%

Source: CHA analysis of RTA data.

2. Availability of DBEs for Federally-Assisted Contracts

a. Methodological Framework

Estimates of the availability of minority- and female-owned firms in RTA’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 DBEs to examine whether minority- and women-owned firms receive parity.¹²⁶ Availability estimates are also crucial for RTA to set narrowly tailored contract goals.

¹²⁶ For our analysis, the term “DBE” includes firms that are certified by the Illinois Unified Certification Program and minority- and women-owned firms that are not certified. As discussed in Chapter II, the inclusion of all minority- and female-owned businesses in the pool casts the broad net approved by the courts that supports the remedial nature of the programs. See *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715, 723 (7th Cir. 2007) (The

We applied the “custom census” approach to estimating availability. As recognized by Illinois courts and the National Model Disparity Study Guidelines,¹²⁷ this methodology is 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 DBEs) and the denominator (*e.g.*, registered vendors or the Census Bureaus’ County Business Patterns data).

Next, by examining a comprehensive group of firms, it “casts a broader net” beyond those known to the agency. As recognized by the Seventh Circuit, this comports with the remedial nature of contracting affirmative action programs by seeking to bring in businesses that have historically been excluded. A custom census 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 agency’s market areas that have not been able to access its 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-DBEs 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.¹²⁸

Fourth, it has been upheld by every court that has reviewed it, including in the successful defenses of the Illinois State Toll Highway’s DBE program,¹²⁹ the

“remedial nature of the federal scheme militates in favor of a method of DBE availability calculation that casts a broader net.”).

¹²⁷ National Disparity Study Guidelines, pp.57-58.

¹²⁸ For a detailed discussion of the role of capacity in disparity studies, see the National Disparity Study Guidelines, Appendix B, “Understanding Capacity.”

¹²⁹ *Midwest Fence, Corp. v. U.S. Department of Transportation et al*, 1:10-cv-05627 (N. Dist. Ill., March 24, 2015).

Illinois Department of Transportation's DBE program,¹³⁰ and the M/WBE construction program for the City of Chicago.¹³¹

b. Estimation of DBE Availability

To conduct the custom census, CHA took the following steps:

1. Created a database of representative, recent, and completed contracts (the Final Contract Data File).
2. Identified RTA's relevant geographic market by counties.
3. Identified RTA's unconstrained product market by 6-digit NAICS codes.
4. Counted all businesses in the relevant markets using Dun & Bradstreet/Hoovers databases.
5. Compiled listed minority-owned and female-owned businesses in the relevant markets into a Master D/M/WBE Directory.
6. Assigned ownership status to all other firms in the relevant markets.
7. Combined the data from Dun & Bradstreet/Hoovers, the Master D/M/WBE Directory, and the Final Contract File to form the unweighted availability data set.
8. Utilized the weights representing the share of total dollars spent in each NAICS code in the product market area to transform the unweighted availability to weighted availability.
9. The resulting product included the overall DBE availability estimate for each NAICS code, the availability estimates for each aggregated industry, and the availability estimates for all industries

As described above, we determined all NAICS codes in the federally-funded portion of the RTA Final Contract Data File to be in the agency's product market. Because of the need to further constrain RTA's geographic market to its service area of the six county Chicago metropolitan area, the geographic market was comprised of Cook, DeKalb, DuPage, Lake, McHenry, and Will) counties. Those counties were used to constrain the data from the Master Directory and the Dun & Bradstreet/Hoovers data

¹³⁰ *Northern Contracting, Inc. v. Illinois Department of Transportation*, 473 F.3d 715 (7th Cir. 2007).

¹³¹ *Builders Association of Greater Chicago v. City of Chicago*, 298 F. Supp.2d 725 (N.D. Ill. 2003).

We purchased the firm information from Hoovers for the firms in the NAICS codes located in RTA's market area. Hoovers, a Dun & Bradstreet company, 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.

In past years, the data from Hoovers (then Dun & Bradstreet) contained detailed information on the racial identity of the owner(s) of the firm. However, recently Hoovers changed its practice, and currently the data simply identify a firm as being minority-owned.¹³² This change required us to revise our approach to determining the racial identity of firms' ownership so as to provide narrowly tailored and accurate analyses concerning possible disparity in an agency's contracting practices.

To provide race detail and improve the accuracy of the race and sex assignments, we created a Master D/M/WBE Directory that combined the results of an exhaustive search for directories and other lists containing information about minority and women-owned businesses. This included the Illinois Unified Certification Program, City of Chicago, Cook County, Illinois Department of Central Management Services, and many others. The resulting list of minority businesses is comprehensive and provides data to supplement the Hoovers database by disaggregating the broad category of "minority-owned" into specific racial groupings. The list of these groups is provided in Appendix A.

We used information from the Master Directory to estimate the specific racial identity of firms in the Hoovers database that are listed as minority-owned. The process involved the following steps:

1. Sort Hoovers by the 6-digit NAICS codes that comprise RTA's product market area.
2. Identify the number of minority-owned firms in these NAICS codes.
3. Sort the Master Directory by each 6-digit NAICS code in RTA's product market area.
4. Determine the number of firms in each NAICS code that are minority owned (some firms in the Master Directory are woman-owned firms).
5. Determine the percentage of the minority-owned firms that are owned by:
 - a. Blacks

¹³² The variable is labelled: "Is Minority Owned" and values for the variable can be either "yes" or "no".

- b. Hispanics
- c. Asians
- d. Native Americans; and

6. Apply these percentages to the number of minority-owned firms in Hoovers.

Below is an example of how this process works after Hoovers and the Master Directory have been sorted and the number of minority-owned firms in each NAICS code has been identified in Hoovers:

1. Hoovers data base (basic counts in original)

NAICS	Is Minority Owned	Total Firms (Overall)
99999	200	2000

2. Master Directory (basic count in original)

NAICS	Black	Hispanic	Asian	Native American	TOTAL
99999	40	20	4	16	80

3. Master Directory (percentages)

NAICS	Black	Hispanic	Asian	Native American	TOTAL
99999	50%	25%	5%	20%	100%

4. Hoovers data base (with Master Directory percentages applied)

NAICS	Black	Hispanic	Asian	Native American	Is Minority-Owned	Total Firms (Overall)
99999	100	50	10	40	200	2000

Based upon the results of these classifications and further assignments, we estimated the availability of DBEs as a percentage of total firms. DBE unweighted availability is defined as the number of DBEs divided by the total number of firms in RTA's market area.

Tables 4.6 present data on the unweighted availability by race and gender and by NAICS codes for all industries, for federally-assisted contracts.

**Table 4.6 Unweighted Availability
Federal Funds
(total dollars)**

NAICS	Black	Hispanic	Asian	Native American	White Women	DBE	Non-DBE	TOTAL
323114	66.7%	11.1%	0.0%	0.0%	0.0%	77.8%	22.2%	100.0%
511210	2.9%	1.8%	4.4%	0.0%	4.1%	13.3%	86.7%	100.0%
541511	4.2%	1.0%	7.7%	0.0%	3.9%	16.8%	83.2%	100.0%
541512	7.0%	2.9%	6.8%	0.0%	7.6%	24.4%	75.6%	100.0%
541611	6.7%	1.1%	1.5%	0.0%	9.1%	18.4%	81.6%	100.0%
541613	3.3%	2.1%	0.8%	0.0%	9.9%	16.1%	83.9%	100.0%
541840	6.1%	3.7%	0.0%	0.0%	8.5%	18.3%	81.7%	100.0%
541910	5.0%	1.0%	1.9%	0.0%	14.8%	22.6%	77.4%	100.0%
Total	5.7%	1.6%	3.7%	0.0%	7.9%	18.9%	81.1%	100.0%

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

To further meet the constitutional and regulatory requirement that the availability estimates that will be used to set goals are narrowly tailored, we then weighted the availability estimate for each of the aggregated industries in the NAICS codes by the share of RTA's spending in each code. Tables 4.7 present these weights for federally-assisted contracts¹³³. Tables 4.8 presents the final estimates of the weighted averages of the individual 6-digit level availability estimates in RTA's market area, for federally-assisted contracts.

Table 4.7 Share of RTA Spending by NAICS Code

¹³³ Remember: these weights are equivalent to the share of contract dollars presented in Table 4.6 above

Federal Funds

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total Sector Dollars)
511210	Software Publishers	41.83%
541613	Marketing Consulting Services	36.95%
541611	Administrative Management and General Management Consulting Services	11.53%
541511	Custom Computer Programming Services	3.95%
541910	Marketing Research and Public Opinion Polling	2.26%
541512	Computer Systems Design Services	1.93%
541840	Media Representatives	1.35%
323114	Commercial printing (except screen and books)	0.20%
Total		100.00%

Source: CHA analysis of RTA data.

Table 4.8 Aggregated Weighted Availability

Federal Funds

(total dollars)

NAICS	Black	Hispanic	Asian	Native American	White Women	DBE	Non- DBE	TOTAL
Total	3.86%	1.82%	2.80%	0.00%	7.20%	15.68%	84.32%	100.00%

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

These weighted availability estimates for federally-assisted contracts can be used by RTA to set its DBE goal under 49 C.F.R. § 26.45(c). This is an approved method and one that has been upheld by the Illinois courts. RTA may use the

weighted availability estimates for non-federally-assisted contracts, provided below, to set goals on other projects pursuant to its state authorizing legislation.

Because RTA’s authority to set DBE goals is derivative – that is, it flows from federal and state law, not its own actions – it relies upon the determination of its grantor governments that there is a compelling interest in remedying discrimination based upon a strong basis in evidence. Therefore, it is not necessary for RTA to find that there are disparities in its federally-assisted contracting activities, as discussed in Chapter II.

C. RTA’s Non-Federally-Assisted Contracts

1. Utilization of DBEs on Non-Federally-Assisted Contracts

As with the analysis for federally-assisted contracts, we used 6-digit NAICS codes to detail the industries that make up this portion of RTA’s market area. However, for non-federal procurements, we went further, and applied a “90/90/90” rule, whereby we analyzed NAICS codes that cover over 90 percent of the total contract dollars; over 90 percent of the prime contract dollars; and over 90 percent of the subcontract dollars. We took this approach to assure a comprehensive analysis of RTA’s activities on its non-federally-assisted contracts. Tables 4.9 through 4.11 present these NAICS codes for RTA’s non-federally-funded contracts that comprised 90% of the dollar value of contracts at each level of analysis (*i.e.*, was the firm receiving the contract as a prime vendor or a subcontractor), the label for each NAICS code, and the industry percentage distribution of spending across NAICS codes and funding source.

**Table 4.9 Industry Percentage Distribution of Contracts by Dollars Paid,
No Federal Funds
All Contracts**

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
524210	Insurance Agencies and Brokerages	33.30%	33.30%
541611	Administrative Management and General Management Consulting Services	11.05%	44.35%
561422	Telemarketing Bureaus and Other Contact Centers	10.47%	54.82%
561320	Temporary Help Services	9.56%	64.38%

541110	Offices of Lawyers	5.99%	70.37%
541810	Advertising Agencies	5.99%	76.36%
518210	Data Processing, Hosting, and Related Services	2.96%	79.32%
561311	Employment Placement Agencies	2.86%	82.18%
541860	Direct Mail Advertising	2.14%	84.32%
488999	All Other Support Activities for Transportation	1.45%	85.77%
541614	Process, Physical Distribution, and Logistics Consulting Services	1.26%	87.04%
523120	Securities Brokerage	1.24%	88.27%
485111	Mixed Mode Transit Systems	1.20%	89.48%
541211	Offices of Certified Public Accountants	1.19%	90.67%
Total			100.00%

Source: CHA analysis of RTA data.

**Table 4.10 Industry Percentage Distribution of Contracts by Dollars Paid,
No Federal Funds
Prime Contracts**

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
524210	Insurance Agencies and Brokerages	38.21%	38.21%
541611	Administrative Management and General Management Consulting Services	12.63%	50.85%
561422	Telemarketing Bureaus and Other Contact Centers	12.07%	62.92%
541110	Offices of Lawyers	6.91%	69.83%
541810	Advertising Agencies	6.91%	76.74%
518210	Data Processing, Hosting, and Related Services	3.41%	80.15%

561320	Temporary Help Services	3.08%	83.24%
488999	All Other Support Activities for Transportation	1.68%	84.91%
541860	Direct Mail Advertising	1.60%	86.51%
523120	Securities Brokerage	1.43%	87.94%
511210	Software Publishers	1.31%	89.25%
541614	Process, Physical Distribution, and Logistics Consulting Services	1.28%	90.53%
Total			100.00%

Source: CHA analysis of RTA data

**Table 4.11 Industry Percentage Distribution of Contracts by Dollars Paid,
No Federal Funds
Subcontracts**

NAICS	NAICS Code Description	Pct Total Contract Dollars	Cumulative Pct Total Contract Dollars
561320	Temporary Help Services	51.82%	51.82%
561311	Employment Placement Agencies	21.55%	73.37%
522320	Financial Transactions Processing, Reserve, and Clearinghouse Activities	6.44%	79.81%
541860	Direct Mail Advertising	5.65%	85.46%
522210	Credit Card Issuing	5.47%	90.94%
Total			100.00%

Source: CHA analysis of RTA data

Having determined the NAICS codes that would be in RTA's product market without any geographic limitations, we then constrained this data to the agency's six-county service area. With this constrained product market, we next examined RTA's utilization of DBEs on its non-federally-assisted contracts, using the same methodology as for federally-assisted contracts. Table 4.12 presents data on the total contract dollars paid by RTA for each NAICS code and the share the contract dollars comprise of all industries, for non-federally-assisted contracts. It

is important to note the contract dollar shares are equivalent to the *weight* of each NAICS code spending. These weights were used to transform data from *unweighted* availability to *weighted* availability.

Table 4.12 NAICS Code Distribution of Contract Dollars

No Federal Funds

NAICS	NAICS Code Description	Total Contract Dollars	Pct Total Contract Dollars
485111	Mixed Mode Transit Systems	590,400.00	1.86%
518210	Data Processing, Hosting, and Related Services	25,138.00	0.08%
524210	Insurance Agencies and Brokerages	16,266,878.00	51.18%
541110	Offices of Lawyers	2,863,089.00	9.01%
541211	Offices of Certified Public Accountants	584,257.00	1.84%
541611	Administrative Management and General Management Consulting Services	3,995,812.50	12.57%
541614	Process, Physical Distribution, and Logistics Consulting Services	102,404.24	0.32%
541810	Advertising Agencies	2,942,119.00	9.26%
541860	Direct Mail Advertising	986,379.25	3.10%
561320	Temporary Help Services	3,428,850.75	10.79%
Total		31,785,327.74	100.00%

Source: CHA analysis of RTA data.

Tables 4.13a through 4.13d also present the paid contract dollars (total dollars and share of total dollars) by NAICS codes for all industries, for non-federally-assisted contracts, this time disaggregated by race and gender.

Table 4.13a Distribution of Contract Dollars by Race and Gender

No Federal Funds

(total dollars)

NAICS	Black	Hispanic	Asian	Native	White	Non-DBE
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				American	Women	
485111	14,000.00	62,200.00	0.00	0.00	0.00	514,200.00
518210	0.00	0.00	0.00	0.00	0.00	25,138.00
524210	78,845.00	0.00	0.00	0.00	0.00	16,188,033.00
541110	0.00	0.00	0.00	0.00	0.00	2,863,089.00
541211	41,060.00	0.00	98,890.00	0.00	0.00	444,307.00
541611	0.00	0.00	0.00	0.00	3,836,590.00	159,222.00
541614	0.00	0.00	0.00	0.00	0.00	102,404.00
541810	0.00	0.00	0.00	0.00	0.00	2,942,119.00
541860	350,386.00	18,160.00	0.00	0.00	617,833.00	0.00
561320	672,750.00	2,784.00	0.00	0.00	521,066.00	2,232,252.00
Total	1,157,041.00	83,144.00	98,890.00	0.00	4,975,489.00	25,470,764.00

Source: CHA analysis of RTA data.

Table 4.13b Distribution of Contract Dollars by Race and Gender
No Federal Funds
(share of total dollars)

NAICS	Black	Hispanic	Asian	Native American	White Women	Non-DBE
485111	2.37%	10.54%	0.00%	0.00%	0.00%	87.09%
518210	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
524210	0.48%	0.00%	0.00%	0.00%	0.00%	99.52%
541110	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
541211	7.03%	0.00%	16.93%	0.00%	0.00%	76.05%
541611	0.00%	0.00%	0.00%	0.00%	96.02%	3.98%
541614	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
541810	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
541860	35.52%	1.84%	0.00%	0.00%	62.64%	0.00%

561320	19.62%	0.08%	0.00%	0.00%	15.20%	65.10%
Total	3.64%	0.26%	0.31%	0.00%	15.65%	80.13%

Source: CHA analysis of RTA data.

**Table 4.13c Distribution of Contract Dollars by Race and Gender
No Federal Funds
(total dollars)**

NAICS	DBE	Non-DBE	TOTAL
485111	76,200.00	514,200.00	590,400.00
518210	0.00	25,138.00	25,138.00
524210	78,845.00	16,188,033.00	16,266,878.00
541110	0.00	2,863,089.00	2,863,089.00
541211	139,950.00	444,307.00	584,257.00
541611	3,836,590.00	159,222.00	3,995,813.00
541614	0.00	102,404.00	102,404.00
541810	0.00	2,942,119.00	2,942,119.00
541860	986,379.00	0.00	986,379.00
561320	1,196,599.00	2,232,252.00	3,428,851.00
Total	6,314,564.00	25,470,764.00	31,785,328.00

Source: CHA analysis of RTA data.

**Table 4.13d Distribution of Contract Dollars by Race and Gender
No Federal Funds
(share of total dollars)**

NAICS	DBE	Non-DBE	TOTAL
485111	12.91%	87.09%	100.00%

518210	0.00%	100.00%	100.00%
524210	0.48%	99.52%	100.00%
541110	0.00%	100.00%	100.00%
541211	23.95%	76.05%	100.00%
541611	96.02%	3.98%	100.00%
541614	0.00%	100.00%	100.00%
541810	0.00%	100.00%	100.00%
541860	100.00%	0.00%	100.00%
561320	34.90%	65.10%	100.00%
Total	19.87%	80.13%	100.00%

Source: CHA analysis of RTA data.

2. Availability of DBEs on Non-Federally-Assisted Contracts

We applied the Custom Census approach that was used to determine the unweighted availability for those NAICS codes in the constrained product market area of RTA’s federally-funded contract to determine the unweighted availability for RTA’s non-federal aid contracts.

Tables 4.14 present data on the unweighted availability by race and gender and by NAICS codes for all industries, for non-federally-assisted contracts.

**Table 4.14 Unweighted Availability
No Federal Funds
(total dollars)**

NAICS	Black	Hispanic	Asian	Native American	White Women	DBE	Non-DBE	TOTAL
485111	6.14%	2.96%	1.55%	0.06%	1.79%	12.50%	87.50%	100.00%

518210	7.25%	1.87%	4.65%	0.20%	9.68%	23.65%	76.35%	100.00%
524210	1.90%	0.45%	0.59%	0.04%	6.72%	9.70%	90.30%	100.00%
541110	1.15%	0.36%	0.36%	0.01%	5.51%	7.39%	92.61%	100.00%
541211	3.10%	0.89%	0.98%	0.03%	5.68%	10.67%	89.33%	100.00%
541611	6.16%	1.48%	1.94%	0.06%	10.66%	20.29%	79.71%	100.00%
541614	5.94%	2.02%	4.18%	0.04%	13.46%	25.64%	74.36%	100.00%
541810	3.73%	1.21%	1.30%	0.04%	11.92%	18.19%	81.81%	100.00%
541860	4.23%	2.28%	3.02%	0.05%	13.75%	23.33%	76.67%	100.00%
561320	6.97%	2.43%	3.40%	0.20%	12.03%	25.03%	74.97%	100.00%
Total	3.05%	0.83%	1.08%	0.04%	7.56%	12.57%	87.43%	100.00%

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

To further meet the constitutional and regulatory requirement that the availability estimates that will be used to set goals are narrowly tailored, we then weighted the availability estimate for each of the aggregated industries in the NAICS codes by the share of RTA's spending in each code. Tables 4.15 present these weights for non-federally-assisted contracts¹³⁴. Tables 4.16 presents the final estimates of the weighted averages of the individual 6-digit level availability estimates in RTA's market area, for non-federally-assisted contracts.

Table 4.15 Share of RTA Spending by NAICS Code

No Federal Funds

NAICS	NAICS Code Description	WEIGHT (Pct Share of Total)
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¹³⁴ Remember: these weights are equivalent to the share of contract dollars presented in Table 4.12 above

		Sector Dollars)
485111	Mixed Mode Transit Systems	1.86%
518210	Data Processing, Hosting, and Related Services	0.08%
524210	Insurance Agencies and Brokerages	51.18%
541110	Offices of Lawyers	9.01%
541211	Offices of Certified Public Accountants	1.84%
541611	Administrative Management and General Management Consulting Services	12.57%
541614	Process, Physical Distribution, and Logistics Consulting Services	0.32%
541810	Advertising Agencies	9.26%
541860	Direct Mail Advertising	3.10%
561320	Temporary Help Services	10.79%
Total		100.00%

Source: CHA analysis of RTA data.

**Table 4.16 Aggregated Weighted Availability
No Federal Funds
(total dollars)**

NAICS	Black	Hispanic	Asian	Native American	White Women	DBE	Non-DBE	TOTAL
Total	3.28%	0.97%	1.22%	0.06%	8.29%	13.82%	86.18%	100.00%

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

V. Analysis of Disparities in RTA's market

A. Introduction

A key element to determine the need for government intervention through contract goals in the sectors of the economy where RTA 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 minority- and women-owned business enterprises ("M/WBEs") in the government's markets form businesses compared to similar non-M/WBEs, and their earnings from such businesses, are highly relevant to the determination whether the market functions properly for all firms regardless of the race or gender of their ownership.¹³⁵

The courts have repeatedly held that analysis of disparities in the rates at which M/WBEs in the government's markets form businesses compared to similar non-M/WBEs, their earnings from such businesses, and their access to capital markets are highly relevant to the determination whether the market functions properly for all firms regardless of the race or gender of their ownership. These analyses contributed to the successful defense of Chicago's construction program.¹³⁶ As explained by the Tenth Circuit, this type of evidence

demonstrates the existence of two kinds of discriminatory barriers to minority subcontracting enterprises, both of which show a strong link between racial disparities in the federal government's disbursements of public funds for construction contracts and the channeling of those funds due to private discrimination. The first discriminatory barriers are to the formation of qualified minority subcontracting enterprises due to private discrimination, precluding from the outset competition for public construction contracts by minority enterprises. The second discriminatory barriers are to fair competition between minority and non-minority subcontracting enterprises, again due to private discrimination, precluding existing minority firms from effectively competing for public construction

¹³⁵ See the discussion in Chapter X of the legal standards applicable to contracting affirmative action programs.

¹³⁶ *Builders Association of Greater Chicago v. City of Chicago*, 298 F.Supp.2d 725 (N.D. Ill. 2003) (holding that City of Chicago's M/WBE program for local construction contracts met compelling interest using this framework).

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.¹³⁷

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.”¹³⁸ 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.¹³⁹ 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

¹³⁷ *Adarand VII*, 228 F.3d at 1168-69 .

¹³⁸ *Id.*

¹³⁹ *Id.*; *Western States*, 407 F.3d at 993; *Northern Contracting I*, 2004 U.S. Dist. LEXIS 3226 at *64.

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.¹⁴⁰

To conduct this type of court-approved economy-wide analysis, we utilized U.S. Bureau of the Census datasets to address the central question whether firms owned by non-Whites and White women face disparate treatment in RTA's marketplace.¹⁴¹

We explored the existence of any disparities by analyzing two datasets, each of which permits examination of the issue from a unique vantage point.

- The Census Bureau's *Survey of Business Owners* allows us to examine disparities using individual firms as the basic unit of analysis.
- The Census Bureau's *American Community Survey* allows us to examine disparities using individual entrepreneurs as the basic unit of analysis.¹⁴²

Using both data sets, we found disparities for minorities and women across most industry sectors in RTA's marketplace.

B. Summary of Findings

1. Disparities in Firm Sales and Payroll

One way to measure equity is to examine the share of total sales and/or payroll a group has relative to its share of total firms. Parity would be represented by the ratio of sales or payroll share over the share of total firms equaling 100% (*i.e.*, a group has 10% of total sales and comprises 10% of all firms.) A ratio that is less than 100% indicates an underutilization of a demographic group, and a ratio of more than 100% indicates an overutilization of a demographic group. Table 5.1 presents data from the Census Bureau's 2012 Survey of Business Owners that indicate very large disparities for non-White and White women-owned firms when examining the sales of all firms, the sales of employer firms (firms that employ at

¹⁴⁰ *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.").

¹⁴¹ While this is often described as a "private sector analysis," a more accurate description is an "economy-wide" analysis because expenditures by the public sector are included in the Census databases.

¹⁴² Data from 2010 - 2014 American Community Survey are the most recent for a five-year period.

least one worker), or the payroll of employer firms. In contrast, the firms that were not non-White and not White women-owned were overutilized using the identical metrics.¹⁴³

**Table 5.1 Disparity Ratios of Firm Utilization Measures
All Industries,
Survey of Business Owners, 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
Non-whites	11.24%	18.47%	63.45%
White Women	13.24%	17.90%	73.38%
Not Non-White/Not White Women	187.79%	134.98%	103.81%

Source: CHA Calculations from Survey of Business Owners

2. Disparities in Wages and Business Earnings

Another way to measure equity is to examine how the economic utilization of particular demographic groups compares to White men. Multiple regression statistical techniques allowed us to examine the impact of race and gender on economic outcome while controlling for other factors, such as education, that might impact outcomes.¹⁴⁴ Using these techniques and data from the Census Bureau’s American Community Survey, we found that Blacks, Latinos, Native Americans, Asian/Pacific Islanders, Others, and White women were underutilized relative to White men: controlling for other factors relevant to business success, wages and business earnings were lower for these groups compared to White men. We report wages and business earnings because disparities in wages and business earnings can lead to disparities in business outcomes. These findings are presented in Table 5.2. Parity would exist if the figures in Table 5.2 were 0.0%; in other words, non-Whites and White women would be utilized identical to White men. When the Table indicates that the wage differential between Blacks and White men is -39.7%, for example, this means that wages received by Blacks are 39.7% less than wages received by similar White men. Because of

¹⁴³ The Survey of Business Owners data available via American Fact Finder do not permit the use of regression analysis on these results.

¹⁴⁴ See Appendix A for more information on multiple regression statistical analysis.

these disparities, the rates at which these groups formed businesses were lower than the business formation rate of similarly situated White men.

**Table 5.2 Economic Outcome Differentials of Minorities and White Women
Relative to White Males
All Industries,
American Community Survey, 2010 - 2014**

Demographic Group	Wages Differentials Relative to White Men (% Change)	Business Earnings Relative to White Men (% Change)
Black	-39.70%	-54.30%
Latino	-18.30%	-26.90%
Native American	-52.60%	-21.00%
Asian/Pacific Islander	-35.30%	-29.20%
Other	-40.40%	-13.30%
White Women	-32.40%	-49.20%

All of the values are statistically significant at the 0.001 level, except for the values for Native American and Other business earnings that are not statistically different from zero.

Source: CHA calculations from the American Community Survey

3. Disparities in Business Formation

A third 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 5.3a presents these results. The Table indicates that White men have higher business formation rates compared to non-Whites and White women. Table 5.3b explores the same question but utilizes multiple regression analysis to control for important factors beyond race and gender. This Table indicates that non-Whites and White women are less likely to form businesses compared to similarly situated White men. For instance, Blacks are 4.9% less likely to form a business compared to White men after other key explanatory variables are controlled. These Tables reinforce the notion that there are significant differences in the rate of non-Whites and White women to form business compared to the rate of White men. These differences support the inference that minority- and women-owned business enterprises ("M/WBEs")

suffer major barriers to equal access to entrepreneurial opportunities in the overall Illinois economy.

Table 5.3a Business Formation Rates

All Industries,

American Community Survey, 2010 - 2014

Demographic Group	Business Formation Rates
Black	4.50%
Latino	4.70%
Native American	8.60%
Asian/Pacific Islander	8.40%
Other	5.90%
Non-White	5.20%
White Women	6.90%
Non-White Male	6.00%
White Male	11.20%

Source: CHA calculations from the American Community Survey

Table 5.3b Business Formation Probabilities Relative to White Males

All Industries,

American Community Survey, 2010 - 2014

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-4.90%
Latino	-3.20%
Native American	-3.00%
Asian/Pacific Islander	-1.40%
Other	-0.90%

White Women	-2.60%
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Source: CHA calculations from the American Community Survey

Overall, the results of our analyses of the Illinois economy demonstrate that minorities and White women continue to face race- and gender-based barriers to equal opportunities as firm owners, and to equal opportunities to earn wages and salaries that impact their ability to form firms and to earn income from those firms. While not dispositive, this suggests that absent some affirmative intervention in the current operations of the Illinois marketplace, RTA will function as a passive participant in these potentially discriminatory outcomes.¹⁴⁵

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.¹⁴⁶ 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:^{147, 148}

- 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

¹⁴⁵ Various appendices to this Chapter contain additional data and methodological explanations. Appendix A provides a "Further Explanation of the Multiple Regression Analysis." Appendix B provides a "Further Explanation of Probit Regression Analysis." Appendix C discusses the meaning and role of "Significance Levels." Appendix D provides detailed "Additional Data from the Analysis of the Survey of Business Owners." Appendix E provides "Additional Data from the Analysis of American Community Survey."

¹⁴⁶ See <http://www.census.gov/econ/sbo/about.html> for more information on the Survey.

¹⁴⁷ Race and gender labels reflect the categories used by the Census Bureau.

¹⁴⁸ 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 sectors in which RTA purchases, we analyzed economy-wide SBO data on the following sectors:

- Construction
- Professional, Scientific and Technical Services
- Information Technology
- Goods
- 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 RTA’s contract data in Chapter IV, where we are 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.¹⁴⁹ We therefore report 2-digit data.

Table 5.4 presents information on which NAICS codes were used to define each sector.

Table 5.4 2-Digit NAICS Code Definition of Sector

SBO Sector Label	2-Digit NAICS Codes
Construction	23
Professional, Scientific, and Technical Services ¹⁵⁰	54
Information	51
Goods	31,42, 44
Services	48, 52, 53, 56, 61, 62, 71, 72, 81

The balance of this Chapter section reports the findings of the SBO analysis. For each sector, we present data describing the sector and report disparities within the sector.

1. All SBO Industries

For a baseline analysis, we examined all industries in the state of Illinois. Table 5.5 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

¹⁴⁹ Even with these broad sector definitions, there was an insufficient number of Native American owned firms to perform our analysis on this demographic group. This limitation also arose for Latinos and Asians in the Services sector.

¹⁵⁰ 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 annual payroll of employers firms

Panel A of Table 5.5 presents data for the four basic non-White racial groups:

- Black
- Latino
- Native American
- Asian

Panel B of Table 5.5 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, firms that are non-White and equally owned by men and women are classified as non-White and firms that are equally owned by non-Whites and Whites and equally owned by men and women are classified as equally owned by non-Whites and Whites.¹⁵¹

**Table 5.5 Percentage Demographic Distribution of Sales and Payroll Data
All Industries, 2012**

	Total Number of	Sales & Receipts -	Number of Firms with	Sales & Receipts -	Number of Paid	Annual payroll
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¹⁵¹ 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

	Firms (All Firms)	All Firms (\$1,000)	Paid Employees (Employer Firms)	All Firms with Paid Employees (Employer Firms) (\$1,000)	Employees	(\$1,000)
Panel A: Distribution of Non-White Firms						
Black	12.49%	0.44%	1.72%	0.32%	0.76%	0.50%
Latino	8.13%	0.93%	4.97%	0.83%	1.84%	1.02%
Native American	0.37%	0.04%	0.18%	0.04%	0.07%	0.05%
Asian	6.35%	1.61%	7.84%	1.51%	2.64%	1.76%
Panel B: Distribution of All Firms						
Non-White	27.46%	3.09%	14.92%	2.76%	5.41%	3.43%
White Women	22.52%	2.98%	15.03%	2.69%	5.34%	3.92%
White Men	41.40%	23.64%	53.87%	22.91%	32.84%	29.43%
Equally Non-White & White	0.57%	0.14%	0.69%	0.12%	0.39%	0.26%
Equally Women & Men	6.13%	1.97%	9.04%	1.82%	3.71%	2.34%
Firms Not Classifiable	1.91%	68.18%	6.45%	69.69%	52.31%	60.62%
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 5.6 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.¹⁵² 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 5.7:

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

¹⁵² 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.

- 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 3.50% (as shown in Table 5.7). This is derived by taking the Black share of sales and receipts for all firms (0.44%) and dividing it by the Black share of total number of all firms (12.49%) that are presented in Table 5.6. If Black-owned firms earned a share of sales equal to their share of total firms, the disparity would have been 100%. 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.¹⁵³ Except for the Black ratio of payroll to the number of employer firms, all disparity ratios for non-White firms and White women firms are below this threshold.¹⁵⁴

Table 5.6 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	12.49%	0.44%	1.72%	0.32%	0.76%	0.50%
Latino	8.13%	0.93%	4.97%	0.83%	1.84%	1.02%

¹⁵³ 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.”).

¹⁵⁴ Because the data in Tables 5.6 and 5.7 are presented for descriptive purposes, significance tests on these results are not conducted.

Native American	0.37%	0.04%	0.18%	0.04%	0.07%	0.05%
Asian	6.35%	1.61%	7.84%	1.51%	2.64%	1.76%
Panel B: Distribution of All Firms						
Non-White	27.46%	3.09%	14.92%	2.76%	5.41%	3.43%
White Women	22.52%	2.98%	15.03%	2.69%	5.34%	3.92%
Not Non-White/Not White Women	50.02%	93.93%	70.05%	94.55%	89.25%	92.65%
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners

**Table 5.7 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	3.50%	18.52%	65.88%
Latino	11.45%	16.68%	55.57%
Native American	11.00%	19.27%	82.34%
Asian	25.40%	19.25%	66.40%
Panel B: Disparity Ratios for All Firms			
Non-Whites	11.24%	18.47%	63.45%
White Women	13.24%	17.90%	73.38%
Not Non-White/Not White Women	187.79%	134.98%	103.81%
All Firms	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners

This same approach was used to examine the key sectors in which RTA purchases. The underlying data on the various industries of construction; professional, scientific and technical services; information technology; and services are presented in Appendix D to this Chapter. The following are summaries of the results of the disparity analyses.

2. Construction

Of the 18 disparity ratios for non-White firms and White women firms presented in Table 5.8, 10 fall under the 80% threshold.

**Table 5.8 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	19.47%	92.76%	88.40%
Latino	25.36%	49.09%	80.64%
Native American	29.82%	19.39%	61.32%
Asian	57.81%	88.19%	89.93%
Panel B: Disparity Ratios for All Firms			
Non-White	26.35%	55.19%	83.38%
White Women	115.63%	72.80%	99.04%
Not Non-White/Not White Women	115.26%	107.54%	100.95%
All Firms	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners

3. Professional, Scientific and Technical Services

Table 5.9 presents disparity ratios in this sector. Seventeen of the available disparity ratios for non-White firms and White women firms presented in Table 5.9 are under the 80% threshold.

**Table 5.9 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	16.55%	46.64%	77.19%
Latino	30.14%	55.18%	63.67%
Native American	21.47%	23.35%	42.85%
Asian	56.03%	56.40%	87.45%
Panel B: Disparity Ratios for All Firms			
Non-White	37.92%	55.78%	79.68%
White Women	22.08%	25.90%	64.63%
Not Non-White/Not White Women	157.54%	126.13%	104.57%
All Firms	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners

4. Information

Because of the dearth of Native American firms in this sector, no analysis is provided for this demographic group for two of the metrics. In addition, the SBO was unable to provide reliable estimates for the firms in this sector that are equally owned by non-Whites and Whites. Twelve of the available 16 disparity ratios for non-White firms and White women firms presented in Table 5.10 fall below the 80% threshold.¹⁵⁵

¹⁵⁵ The values of “S” in Tables 5.10 – 5.12 reflect that the SBO did not publish data in these instances because it was “withheld because estimate did not meet publication standards”. See the Disclosure section under Methodology at <http://www.census.gov/econ/sbo/methodology.html>.

**Table 5.10 Disparity Ratios – Aggregated Groups
Information, 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	8.98%	31.27%	124.65%
Latino	4.30%	13.77%	142.78%
Native American	1.59%	S	S
Asian	8.55%	9.99%	96.58%
Panel B: Disparity Ratios for All Firms			
Non-White	7.17%	16.12%	118.60%
White Women	6.29%	9.39%	66.30%
Not Non-White/Not White Women	167.03%	124.02%	100.78%
All Firms	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners

5. Services

The SBO was unable to provide reliable estimates for Native American firms in any metrics this sector; in addition, estimates could not be made for Asian-owned firms in 2 of the metrics. Of the available 16 disparity ratios for non-White firms and White women firms presented in Table 5.11, all fall below the 80% threshold.

**Table 5.11 Disparity Ratios – Aggregated Groups
All 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	4.99%	19.97%	63.10%
Latino	14.96%	16.43%	52.72%
Native American	S	S	S
Asian	28.42%	S	S
Panel B: Disparity Ratios for All Firms			
Non-White	12.82%	18.43%	59.77%
White Women	15.74%	18.86%	71.68%
Not Non-White/Not White Women	212.78%	142.23%	105.09%
All Firms	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners

6. Goods

The SBO was unable to provide reliable estimates for the firms that are Black and Native American firms in this sector; consequently, no analysis is provided for these demographic groups. All of the disparity ratios for the remaining categories (presented in Table 5.12) fall below the 80% threshold.

**Table 5.12 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	S	S	S
Latino	9.57%	19.09%	68.35%
Native American	S	S	S
Asian	19.54%	14.13%	68.32%
Panel B: Disparity Ratios for All Firms			
Non-White	11.38%	15.38%	97.49%

White Women	9.03%	17.58%	82.86%
Not Non-White/Not White Women	177.21%	131.35%	100.90%
All Firms	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners

D. Disparate Treatment in the Marketplace: Evidence from the Census Bureau's 2010 - 2014 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 RTA's DBE program.

In the previous section, we explored this question using SBO data. In this section, we use the Census Bureau's *American Community Survey* data to address other aspects of this question. One element asks if there exist demographic differences 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. 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 1 percent of the population and the PUMS provides detailed information at the individual level. In order to obtain robust results from our analysis, we use the file that combines data for 2010 through 2014, the most recent available.¹⁵⁶ With this rich data set, our analysis can establish with greater certainty any causal links between race, gender and economic outcomes.

Often, the general public sees clear associations between race, gender, and economic outcomes and assumes this association reflects a tight causal connection. However, economic outcomes are determined by a broad set of

¹⁵⁶ For more information about the ACS PUMS, please see <http://www.census.gov/acs/>.

factors, including, but 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 the 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.

We employ a multiple regression statistical technique to process this data. This methodology allows us to perform two analyses: 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 result of 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 result of regression analysis, this technique also allows us to 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 not 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% confident that the relationship is different from zero; if the estimated relationship is statistically significant at the 0.01 level, that indicates we are 99% 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% confident that the relationship is different from zero.¹⁵⁷

In the balance of this section, we report data on the following sectors in the Chicago Metro Area (Cook, DeKalb, DuPage, Kane, Lake, McHenry, and Will Counties):

- All Industries
- Construction
- Construction-Related Services
- Information Technology
- Services
- Goods

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 in Chicago Metro Area

a. Business Formation Rates

Table 5.13 presents business formation rates in the Illinois economy by demographic groups.

**Table 5.13 Business Formation Rates,
All Industries, 2010 - 2014**

Demographic Group	Business Formation Rates
Black	4.54%
Latino	4.67%
Native American	4.32%
Asian/Pacific Islander	8.95%

¹⁵⁷ Most social scientists do not endorse utilizing a confidence level of less than 95%. Appendix C explains more about statistical significance.

Other	8.95%
Non-White	5.32%
White Women	7.48%
Non-White Male	6.17%
White Male	11.40%

Source: CHA calculations from the American Community Survey

White males have a higher rate of business formation than Non-White males. However, as with the issue of income and earnings differences, the higher rates could be attributed to factors aside from race and/or gender. To explore this question further, a probit regression statistical technique was employed.¹⁵⁸ The basic question is: how does the probability of forming a business vary as factors such as race, gender, etc. vary?

Table 5.14 presents the results of the probit analysis for the Illinois economy.

**Table 5.14 Business Formation Probability Differentials
for Selected Groups Relative to White Men
All Industries, 2010 - 2014**

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-5.02%***
Latino	-3.97%***
Native American	-7.17%***
Asian/Pacific Islander	-1.17%***
Other	0.00%***
White Women	-2.61%***

Source: CHA calculations from the American Community Survey

*** Indicates statistical significance at the 0.001 level

¹⁵⁸ Probit is a special type of regression technique where the dependent variable only has two possible values: 0 or 1. For instance, the unit of observation is an individual and he/she forms a business or does not form a business. In the former case, the value of the dependent variable would be 1 while in the latter case, the value of the dependent variable would be 0. This is in contrast to the multiple regression technique discussed earlier where the dependent variable such as wages might have any non-negative value. For a more extensive discussion of probit regression analysis, see Appendix B.

The analysis indicates that non-Whites and White women in Illinois are less likely than White men to form businesses even after controlling for key factors. The reduction in probability ranges from 1.17% to 7.17%. Once again, these estimates are statistically significant at the 99.1 level.

b. Differences in Wage and Salary Incomes

Table 5.15 presents the findings from the wage and salary income regression analysis examining the Illinois economy. This indicates the wage differential for selected demographic groups in Illinois relative to White men.

**Table 5.15 Wage Differentials
for Selected Groups Relative to White Men
All Industries, 2010 - 2014**

Demographic Group	Wages Relative to White Men (% Change)
Black	-39.70%***
Latino	-18.30%***
Native American	-52.60%***
Asian/Pacific Islander	-35.30%***
Other	-40.40%***
White Women	-32.40%***

Source: CHA calculations from the American Community Survey

*** Indicates statistical significance at the 0.001 level

Holding constant factors such as education, age, occupation, and industry, Blacks, Latinos, White women, Asian/Pacific Islanders and Others in Illinois earn less than White men in the overall economy. Estimates of the coefficients for Black, Latino, Native American, and Other are statistically significant at the 0.001 level. Estimates of the coefficients for Asian/Pacific Islander and White Women are statistically significant at the 0.01 level. For example, we are 99.9% confident that wages for Blacks in Illinois (after controlling for numerous other factors) are 39.7% less than those received by White men.

c. Differences in Business Earnings

The same approach was used to investigate if there were differences in business earnings received by Non-Whites and White women entrepreneurs and White male entrepreneurs. Using the PUMS, we limited the sample to the self-employed and examined how their business income varied in response to factors such as race, gender, age, education, and industry. Table 5.16 presents these findings.

**Table 5.16 Business Earnings Differentials
for Selected Groups Relative to White Men
All Industries, 2010 - 2014**

Demographic Group	Earnings Relative to White Men (% Change)
Black	-54.30%***
Latino	-26.90%***
Native American	-21.00%
Asian/Pacific Islander	-29.20%***
Other	-13.30%
White Women	-49.20%***

Source: CHA calculations from the American Community Survey

*** Indicates statistical significance at the 0.001 level

Four of the estimates of the coefficients for these variables were found to be statistically significant at the 0.001 level. The differentials in business earnings received by Non-Whites and White women compared to White males ranged from -26.9% to -54.3%.

d. Conclusion

Using descriptive analysis, Table 5.13 shows that differentials exist between the business formation rates by non-Whites and White women and White males across industry sectors. Table 5.14 presents the results of a further statistical analysis, which indicated that even after taking into account potential mitigating factors, the differential still exists. Tables 5.15 and 5.16 present data indicating differentials in wages and business earnings after controlling for possible explanatory factors. These analyses support the conclusion that barriers to business success do affect non-Whites and White women entrepreneurs.

2. The Construction Industry in Illinois

a. Business Formation Rates

Table 5.17 presents business formation rates in the Illinois construction industry for selected demographic groups.

**Table 5.17 Business Formation Rates,
Chicago Metro Area
Construction, 2010 - 2014**

Demographic Group	Business Formation Rates
Black	20.20%
Latino	14.30%
Native American	20.77%
Asian/Pacific Islander	27.46%
Other	19.94%
Non-White	16.05%
White Women	16.31%
Non-White Male	16.10%
White Male	25.68%

Source: CHA calculations from the American Community Survey

White males have a higher rate of business formation than non-White males except for Asians. However, as with the issue of income and earnings differences, the higher rates could be attributed to factors aside from race and/or gender. To explore this question further, a probit regression statistical technique was employed. The basic question is: how does the probability of forming a business vary as factors such as race, gender, etc. vary?

Table 5.18 presents the results of the probit analysis for the construction industry in Illinois.

**Table 5.18 Business Formation Probability Differentials
for Selected Groups Relative to White Men
Construction, 2010 - 2014**

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-3.07%
Latino	-9.43%
Native American	-6.40%

Asian/Pacific Islander	0.44%
Other	-1.36%
White Women	-4.43%

Source: CHA calculations from the American Community Survey

The analysis indicates that non-Whites and White women in Illinois are less likely to form construction businesses compared to White men even after controlling for key factors. The reduction in probability ranges from 0.44% to 9.43%. Once again, these estimates are statistically significant at the 99.1 level.

b. Differences in Wage and Salary Incomes

Table 5.19 presents the findings from the wage and salary income regression analysis examining the construction industry in Illinois. This indicates the wage differential for selected demographic groups in Illinois relative to White men.

**Table 5.19 Wage Differentials
for Selected Groups Relative to White Men
Construction, 2010 - 2014**

Demographic Group	Wages Relative to White Men (% Change)
Black	-37.60%***
Latino	-15.70%***
Native American	-25.70%
Asian/Pacific Islander	-53.70%***
Other	31.10%
White Women	-30.00%***

Source: CHA calculations from the American Community Survey

*** Indicates statistical significance at the 0.001 level

Holding constant factors such as education, age, occupation, and industry, Blacks, Latinos, White women, and Asian/Pacific Islanders in Illinois earn less than White men in the construction industry. The differential ranges between 15.7% less and 53.7% less. Estimates of the coefficients for Black, Latino, Native American, and Asian/Pacific Islander are statistically significant at the 0.001 level.

c. Differences in Business Earnings

The same approach was used to investigate if there were differences in business earnings received by non-White male entrepreneurs and White male entrepreneurs. Using the PUMS, we limited the sample to the self-employed and

examined how their business income varied in response to factors such as race, gender, age, education, and industry. Table 5.20 presents these findings.

Table 5.20 Business Earnings Differentials for Selected Groups Relative to White Men Construction, 2010 - 2014

Demographic Group	Earnings Relative to White Men (% Change)
Black	-47.30%**
Latino	5.43%
Native American	-34.10%
Asian/Pacific Islander	52.00%
Other	-60.00%
White Women	-47.30%**

Source: CHA calculations from the American Community Survey

** Indicates statistical significance at the 0.01 level

The only coefficients that were statistically significant were those for Black and White Women and these estimates were statistically significant at the 0.01 level. These estimated differentials in business earnings 47.3% less than White males. The remaining coefficients were not found to be significantly statistically different from zero.

d. Conclusion

Using descriptive analysis, Table 5.17 shows that differentials exist between the business formation rates by non-White males and White males. Table 5.18 presents the results of a further statistical analysis, which indicated that even after taking into account potential mitigating factors, the differential still exists. Tables 5.19 and 5.20 present data indicating differentials in wage and business earnings after controlling for possible explanatory factors. These analyses support the conclusion that barriers to business success do affect non-Whites and White women entrepreneurs.

3. The Construction-Related Services Industry in Illinois

a. Business Formation Rates

Table 5.21 presents business formation rates in the construction-related services industry in Illinois for selected demographic groups.

**Table 5.21 Business Formation Rates, Illinois
Construction-Related Services, 2010 - 2014**

Demographic Group	Business Formation Rates
Black	2.25%
Latino	1.67%
Native American	0.00%
Asian/Pacific Islander	6.12%
Other	0.00%
Non-White	3.42%
White Women	10.80%
Non-White Male	6.81%
White Male	12.96%

Source: CHA calculations from the American Community Survey

White males have a higher rate of business formation than non-White males. (There were zero reported Native American or Other entrepreneurs in the construction-related services industry.) However, as with the issue of income and earnings differences, the higher rates could be attributed to factors aside from race and/or gender. To explore this question further, a probit regression statistical technique was employed. The basic question is: how does the probability of forming a business vary as factors such as race, gender, etc. vary?

Table 5.22 presents the results of the probit analysis for the construction industry in Illinois.

**Table 5.22 Business Formation Probability Differentials
for Selected Groups Relative to White Men
Construction-related Services, 2010 - 2014**

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-8.04%***
Latino	-9.97%***
Native American	---
Asian/Pacific Islander	-5.53%***
Other	---
White Women	1.01%***

Source: CHA calculations from the American Community Survey

The analysis indicates that compared to White men, non-Whites in Illinois are less likely to form construction-related services businesses even after controlling for key factors. The reduction in probability ranges from 5.53% less to 9.97% less. White women were more likely to form businesses in this sector by 1.01%. Once again, these estimates are statistically significant at the 99.1 level.¹⁵⁹

b. Differences in Wage and Salary Incomes

Table 5.23 presents the findings from the wage and salary income regression analysis examining the construction-related services industry in Illinois. This indicates the wage differential for selected demographic groups in Illinois relative to White men.

¹⁵⁹ Because of small sample sizes, coefficients could not be estimated for Native American and Other

**Table 5.23 Wage Differentials
for Selected Groups Relative to White Men
Construction-Related Services, 2010 - 2014**

Demographic Group	Wages Relative to White Men (% Change)
Black	-46.30%***
Latino	-23.00%***
Native American	-172.00%***
Asian/Pacific Islander	-5.12%
Other	---
White Women	-30.00%***

Source: CHA calculations from the American Community Survey

*** Indicates statistical significance at the 0.001 level

Holding constant factors such as education, age, occupation, and industry, Blacks, Latinos, White women, and Native American in Illinois earn less than White men in the construction-related services industry. The differential ranges between 23.0% less and 172.0% less and these estimates are statistically significant at the 0.001 level. (The proper interpretation of the estimated coefficient for Native American is that White men earn 172% greater than similarly situated Native Americans.) The estimated coefficient for Asian was not statistically different from zero.

c. Differences in Business Earnings

The same approach was used to investigate if there were differences in business earnings received by non-White male entrepreneurs and White male entrepreneurs. Using the PUMS, we limited the sample to the self-employed and examined how their business income varied in response to factors such as race, gender, age, education, and industry. Table 5.24 presents these findings.

Table 5.24 Business Earnings Differentials for Selected Groups Relative to White Men Construction-related Services, 2010 - 2014

Demographic Group	Earnings Relative to White Men (% Change)
Black	-127.00%
Latino	28.10%
Native American	---
Asian/Pacific Islander	-278.00%
Other	---
White Women	-183.00%***

Source: CHA calculations from the American Community Survey

*** Indicates statistical significance at the 0.001 level

Only the estimated coefficient for White Women was found to be statistically significant at the 0.001 level. The estimated coefficients for Black, Latino, and Asian/Pacific Islander were not found to be significantly statistically different from zero.

d. Conclusion

Using descriptive analysis, Table 5.21 shows that differentials exist between the business formation rates by non-White males and White males. Table 5.22 presents the results of a further statistical analysis, which indicated that even after taking into account potential mitigating factors, the differential still exists. Tables 5.23 and 5.24 present data indicating differentials in wage and business earnings after controlling for possible explanatory factors. These analyses support the conclusion that barriers to business success do affect non-Whites and White women entrepreneurs.

4. The Information Technology Industry in Illinois

a. Business Formation Rates

Table 5.25 presents business formation rates in the information technology industry in Illinois for selected demographic groups.

**Table 5.25 Business Formation Rates, Illinois
Information Technology, 2010 - 2014**

Demographic Group	Business Formation Rates
Black	4.84%
Latino	4.94%
Native American	0.00%
Asian/Pacific Islander	6.19%
Other	0.00%
Non-White	5.47%
White Women	7.95%
Non-White Male	6.27%
White Male	11.25%

Source: CHA calculations from the American Community Survey

White males have a higher rate of business formation than non-Whites and White women. However, as with the issue of income and earnings differences, the higher rates could be attributed to factors aside from race and/or gender. To explore this question further, a probit regression statistical technique was employed. The basic question is: how does the probability of forming a business vary as factors such as race, gender, etc. vary?

Table 5.26 presents the results of the probit analysis for the information technology industry in Illinois.

**Table 5.26 Business Formation Probability Differentials
for Selected Groups Relative to White Men
Information Technology, 2010 - 2014**

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-0.71%***
Latino	-0.69%***
Native American	---
Asian/Pacific Islander	-0.63%***
Other	---
White Women	-0.51%***

Source: CHA calculations from the American Community Survey

*** Indicates statistical significance at the 0.001 level

The analysis indicates that non-Whites and White women in Illinois are less likely to form information technology businesses compared to White men even after controlling for key factors. The reduction in probability ranges from 0.51% less to .71% less. Once again, these estimates are statistically significant at the 99.1 level.

b. Differences in Wage and Salary Incomes

Table 5.27 presents the findings from the wage and salary income regression analysis examining the information technology industry in Illinois. This indicates the wage differential for selected demographic groups in Illinois relative to White men.

**Table 5.27 Wage Differentials
for Selected Groups Relative to White Men
Information Technology, 2010 - 2014**

Demographic Group	Wages Relative to White Men (% Change)
Black	-32.90%***
Latino	-19.10%***
Native American	-190.00%***
Asian/Pacific Islander	-16.00%***
Other	-20.50%
White Women	-21.60%***

*** Indicates statistical significance at the 0.001 level

Source: CHA calculations from the American Community
Survey

Holding constant factors such as education, age, occupation, and industry, Blacks, Latinos, Native Americans, Asian/Pacific Islanders, and White women in Illinois earn less than White men in the information technology industry. The differential ranges between 16.0% less and 190.0% less. (The proper interpretation of the estimated coefficient for Native Americans is that White men earn 190.0% greater than similarly situated Native Americans.) The estimates of all coefficients are statistically significant at the 0.001 level.

c. Differences in Business Earnings

The same approach was used to investigate if there were differences in business earnings received by non-White male entrepreneurs and White male entrepreneurs. Using the PUMS, we limited the sample to the self-employed and examined how their business income varied in response to factors such as race, gender, age, education, and industry. Table 5.28 presents these findings.

**Table 5.28 Business Earnings Differentials
for Selected Groups Relative to White Men
Information Technology, 2010 - 2014**

Demographic Group	Earnings Relative to White Men (% Change)
Black	-140.00%**
Latino	-60.90%
Native American	---
Asian/Pacific Islander	-104.00%*
Other	---
White Women	-61.20%

Source: CHA calculations from the American Community Survey

** Indicates statistical significance at the 0.01 level

* Indicates statistical significance at the 0.05 level

The estimated coefficient for Black was statistically significant at the 0.01 level. The estimated coefficient for Asian/Pacific Islander was statistically significant at the 0.05 level. (The proper interpretation of the estimated coefficient for Asian/Pacific Islander is that White men earn 104.0% greater than similarly situated Asian/Pacific Islanders.) For the estimated coefficient for Latino, the results were not found to be significantly statistically different from zero. For Native Americans and Others, the sample sizes were too small to calculate an estimated coefficient.

d. Conclusion

Using descriptive analysis, Table 5.25 shows that differentials exist between the business formation rates and by non-White males and White males. Table 5.26 presents the results of a further statistical analysis, which indicated that even after taking into account potential mitigating factors, the differential still exists. Tables 5.27 and 5.28 present data indicating differentials in wage and business earnings after controlling for possible explanatory factors. These analyses support the conclusion that barriers to business success do affect non-Whites and White women entrepreneurs.

5. The Services Industry in Illinois

a. Business Formation Rates

Table 5.29 presents business formation rates in the services industry in Illinois for selected demographic groups.

Table 5.29 Business Formation Rates, Illinois Services, 2010 - 2014

Demographic Group	Business Formation Rates
Black	5.03%
Latino	4.73%
Native American	3.22%
Asian/Pacific Islander	9.14%
Other	13.12%
Non-White	5.72%
White Women	9.23%
Non-White Male	7.16%
White Male	14.17%

Source: CHA calculations from the American Community Survey

White males have a higher rate of business formation than non-White males. However, as with the issue of income and earnings differences, the higher rates could be attributed to factors aside from race and/or gender. To explore this question further, a probit regression statistical technique was employed. The basic question is: how does the probability of forming a business vary as factors such as race, gender, etc. vary?

Table 5.30 presents the results of the probit analysis for the services industry in Illinois.

**Table 5.30 Business Formation Probability Differentials
for Selected Groups Relative to White Men
Services, 2010 - 2014**

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-6.10%***
Latino	-4.06%***
Native American	-11.08%***
Asian/Pacific Islander	-2.32%***
Other	-0.24%***
White Women	-2.82%***

Source: CHA calculations from the American Community Survey

*** Indicates statistical significance at the 0.001 level

The analysis indicates that compared to White men, non-Whites and White women in Illinois are less likely to form services businesses even after controlling for key factors. The reduction in probability ranges from 0.24% less to 11.08% less. Once again, these estimates are statistically significant at the 99.1 level.

b. Differences in Wage and Salary Incomes

Table 5.31 presents the findings from the wage and salary income regression analysis examining the services industry in Illinois. This indicates the wage differential for selected demographic groups in Illinois relative to White men.

**Table 5.31 Wage Differentials
for Selected Groups Relative to White Men
Services, 2010 - 2014**

Demographic Group	Wages Relative to White Men (% Change)
Black	-41.80%***
Latino	-16.90%***
Native American	-68.60%***
Asian/Pacific Islander	-33.50%***

Other	-45.60%***
White Women	-30.90%***

Source: CHA calculations from the American Community Survey

*** Indicates statistical significance at the 0.001 level

Holding constant factors such as education, age, occupation, and industry, Blacks, Latinos, White women, Asian/Pacific Islanders, and Others in Illinois earn less than White men in the services industry. The differential ranges between 16.9% less and 68.6% less. All estimated coefficients statistically significant at the 0.001 level.

c. Differences in Business Earnings

The same approach was used to investigate if there were differences in business earnings received by non-White male entrepreneurs and White male entrepreneurs. Using the PUMS, we limited the sample to the self-employed and examined how their business income varied in response to factors such as race, gender, age, education, and industry. Table 5.32 presents these findings.

Table 5.32 Business Earnings Differentials for Selected Groups Relative to White Men Services, 2010 - 2014

Demographic Group	Earnings Relative to White Men (% Change)
Black	-52.60%***
Latino	-31.40%***
Native American	-15.80%
Asian/Pacific Islander	-32.20%***
Other	-79.40%
White Women	-47.10%***

Source: CHA calculations from the American Community Survey

*** Indicates statistical significance at the 0.001 level

The estimates of the coefficients for Black, Latino, Asian/Pacific Islander, and White Women were found to be statistically significant at the 0.001 level. The differentials in business earnings relative to White males ranged from 31.4% less to 79.4% less.

d. Conclusion

Using descriptive analysis, Table 5.29 shows that differentials exist between the business formation rates by non-White males and White males. Table 5.30 presents the results of a further statistical analysis, which indicated that even after taking into account potential mitigating factors, the differential still exists. Tables 5.31 and 5.32 present data indicating differentials in wage and business earnings after controlling for possible explanatory factors. These analyses support the conclusion that barriers to business success do affect non-Whites and White women entrepreneurs.

6. The Goods Industry in Illinois

a. Business Formation Rates

Table 5.33 presents business formation rates in the goods industry in Illinois for selected demographic groups.

**Table 5.33 Business Formation Rates, Illinois
Goods, 2010 - 2014**

Demographic Group	Business Formation Rates
Black	2.17%
Latino	3.15%
Native American	0.00%‡
Asian/Pacific Islander	8.74%
Other	0.00%‡
Non-White	3.93%
White Women	3.60%
Non-White Male	3.80%
White Male	6.28%

Source: CHA calculations from the American Community Survey

‡ The observations in this demographic group was too small for a reliable statistical analysis

White males have a higher rate of business formation than non-Whites and White women except for Asian/Pacific Islander. Note: the observed number of Native American and Other was too small for any reliable statistical analysis. However, as with the issue of income and earnings differences, the higher rates could be attributed to factors aside from race and/or gender. To explore this question further, a probit regression statistical technique was employed. The basic

question is: how does the probability of forming a business vary as factors such as race, gender, etc. vary?

Table 5.34 presents the results of the probit analysis for the construction industry in Illinois.

**Table 5.34 Business Formation Probability Differentials
for Selected Groups Relative to White Men
Goods, 2010 - 2014**

Demographic Group	Probability of Forming a Business Relative to White Men
Black	-3.02%***
Latino	-1.01%***
Native American	---
Asian/Pacific Islander	2.60%***
Other	---
White Women	-2.15%***

Source: CHA calculations from the American Community Survey

*** Indicates statistical significance at the 0.001 level

The analysis indicates that Blacks, Latinos, and White women in Illinois are less likely to form goods businesses compared to White men even after controlling for key factors. (Once again, this analysis does not include Native Americans and Others.) The reduction in probability ranges from 1.0% less to 3.0% less. However, Asian/Pacific Islanders were more likely to form businesses in this industry relative to White men by 2.6%. These estimates are statistically significant at the 99.1 level.

b. Differences in Wage and Salary Incomes

Table 5.35 presents the findings from the wage and salary income regression analysis examining the goods industry in Illinois. This indicates the wage differential for selected demographic groups in Illinois relative to White men.

**Table 5.35 Wage Differentials
for Selected Groups Relative to White Men
Goods, 2010 - 2014**

Demographic Group	Wages Relative to White Men (% Change)
Black	-38.50%***
Latino	-24.40%***
Native American	-13.50%
Asian/Pacific Islander	-43.30%***
Other	-105.00%***
White Women	-37.50%***

Source: CHA calculations from the American Community Survey

*** Indicates statistical significance at the 0.001 level

Holding constant factors such as education, age, occupation, and industry, Blacks, Latinos, White women, Asian/Pacific Islanders, and Others in Illinois earn less than White men in the goods industry. Estimates of these coefficients are statistically significant at the 0.001 level. The differential ranges between 24.4% less and 105.0% less.

c. Differences in Business Earnings

The same approach was used to investigate if there were differences in business earnings received by non-White male entrepreneurs and White male entrepreneurs. Using the PUMS, we limited the sample to the self-employed and examined how their business income varied in response to factors such as race, gender, age, education, and industry. Table 5.36 presents these findings.

**Table 5.36 Business Earnings Differentials
for Selected Groups Relative to White Men
Goods, 2010 - 2014**

Demographic Group	Earnings Relative to White Men (% Change)
Black	-124.00%*
Latino	-48.20%
Native American	---
Asian/Pacific Islander	0.98%
Other	---

White Women	-162.00%***
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Source: CHA calculations from the American Community Survey

*** Indicates statistical significance at the 0.001 level

* Indicates statistical significance at the 0.05 level

White women earned 162.0% less than White males and the coefficient was statistically significant at the 0.001 level.

d. Conclusion

Using descriptive analysis, Table 5.33 shows that differentials exist between the business formation rates by non-Whites and White women and White males. Table 5.34 presents the results of a further statistical analysis, which indicated that even after taking into account potential mitigating factors, the differential still exists. Tables 5.35 and 5.36 present data indicating differentials in wage and business earnings after controlling for possible explanatory factors. These analyses support the conclusion that barriers to business success do affect non-Whites and White women entrepreneurs.

VI. Qualitative Evidence of Race and Gender Discrimination in RTA'S Market

In addition to quantitative data, an availability study should further explore anecdotal evidence of experiences with discrimination in contracting opportunities. Such data are relevant to the determination of whether race- and gender-neutral measures will fully remediate discrimination and create a level playing field for RTA's contracts. As observed by the Supreme Court, anecdotal evidence can be persuasive because it "brought the cold [statistics] convincingly to life."¹⁶⁰ Evidence about discriminatory practices engaged in by prime contractors and consultants, lenders and other actors relevant to business opportunities on agency contracts and associated subcontracts has been found probative regarding barriers both to minority firms' business formation and to their success on governmental projects.¹⁶¹ 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."¹⁶² "[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."¹⁶³

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."¹⁶⁴ 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

¹⁶⁰ *International Brotherhood of Teamsters v. United States*, 431 U.S. 324, 399 (1977).

¹⁶¹ *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).

¹⁶² *Concrete Works of Colorado, Inc. v. City and County of Denver*, 36 F.3d 1513, 1520, 1530 (10th Cir. 1994).

¹⁶³ *Engineering Contractors Association of South Florida, Inc. v. Metropolitan Dade County*, 122 F.3d 895, 926 (11th Cir. 1997).

¹⁶⁴ *H.B. Rowe Co., Inc. v. Tippet*, 615 F.3d 233, 249 (4th Circ. 2010).

described by Denver’s witnesses or to relate their own perceptions on discrimination in the Denver construction industry.”¹⁶⁵

To explore anecdotal evidence of possible discrimination against minorities and women in RTA’s geographic and industry markets and the need for race- and gender-conscious contract goals, we interviewed 26 business owners or executives from the industries from which RTA purchases. Firms ranged in size from large national businesses to decades-old family-owned firms to new start-ups. Owners’ backgrounds included individuals with many years of experience in their fields and entrepreneurs beginning their careers. We sought to explore their experiences in seeking and performing public and private sector prime contracts and subcontracts, with the RTA, other transportation agencies and in the private sector. We also elicited recommendations for improvements to RTA’s Disadvantaged Enterprise Program (“DBE”) program.

As with other jurisdictions, most minority and women owners reported that while some progress has been made in integrating their firms into public and private sector contracting activities through race- and gender-conscious contracting programs, significant barriers remain.

The following are summaries of the issues discussed and interviewees’ experiences and comments. Quotations are indented, and have been edited for readability.

A. Discriminatory Attitudes and Negative Perceptions of Competency

Several participants reported that potential clients display negative attitudes about the competency and professionalism of minorities and women. The assumption is that minority firms are less qualified.

There are people at the agencies were [being a DBE is] a black mark. Just being certified. In terms of getting prime work, if you put in a proposal and you don’t say I’m a DBE, you might have a better chance than to say and I’m a DBE firm because then it’s like, oh, risky.

The onus is on the project owner [and] the people that are staffed within their organization. That is a cultural issue. It is hard to affect culture.

¹⁶⁵ *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).

I've never gone and teased out whether there are some institutional racism there or sexism, but I think just even [firm size] is enough cover.

If the project owners see minority MBE firms as being competent to perform larger scopes of work based on their actual capacity and historical past performance, then they will open up the doors for more of us to have privilege to the opportunity in the first place and then the larger primes that are kind of used to monopolizing or having their way will see us differently but there is this unspoken connection to the words sub contractor as being in a subservient position.

Because of negative perceptions of minority and women businesses, DBE certification can actually reduce a firm's opportunities.

[What] we learned a long time ago was the MBE or the WBE or the DBE [certifications], they can help you or hurt you. We changed out marketing materials years ago and put that in the back end because what are we first and foremost? We an engineering solution providers for the clients and if this project happens to have goals we can help you fulfill that as well, it's a win-win.... There is always this preconceived notion that [because] you are an M[BE] you can't be that competent

One Caucasian woman stated that she had not encountered barriers based on her gender.

If you have the technology, I don't think it makes a difference on sexual identity or anything as long as you have the equipment to produce it. If you don't, you're out anyway.

B. Obtaining Work on an Equal Basis

These types of barriers lead minorities and women to unanimous agreement that goals remain necessary to level the playing field and equalize opportunities. DBEs sought the right to compete on a fair and equal basis. Without goals, DBEs

believed they would be shut out of the RTA's market. Interviewees were clear that contract goals remain necessary to ensure equal opportunities on RTA projects.

No, [prime consultants do not solicit or use them on contracts without goals].

Goals are required.

I don't think there's any doubt that there's really deeply entrenched racism still in Chicago and the Chicago metropolitan area. That there's a need for a DBE program for that reason.

The only time I got the call [is when the project is in a minority neighborhood].

They don't call us, but I never get told why we don't do it.

Municipalities and counties generally don't have those kinds of goals. We don't get called for that kind of work.

[A prime consultant] did call us for a specialty. It was only because of the scope of services was so small.

Another example is the big firms that do work for Metra, but also do work for freight railroads. That's a separate division. The freight railroads don't have goals, and you never get work as a sub on that work. Talk about the good old boys network.

I don't think that [a totally race- and gender-neutral program would] be good enough.... Everybody's got somebody that knows somebody that has a cousin that owns a small business that will do work. So if you don't force it, it won't happen.

Prime contracts were especially difficult to obtain. This is especially important for RTA, since most of its work is professional services projects where subjective evaluations can support biased perceptions and attitudes.

The assumption [was] that all of these white male guys in gray suits were the primes, and the DBE's weren't at the event and were some kind of outsiders. The other message that I got [at an outreach meeting for Illinois Tollway projects] was that this was a sacrifice on the part of the primes, that they needed to be thanked for coming on board in that way. I found it very offensive.

Through the years, there's been a little bit more acceptance of the smaller, the DBE contractors themselves in working [as prime consultants]. Somewhat of an acceptance. That's your role [to be a subconsultant]... Maybe she can do part of our project, but you know, I probably wouldn't look at her for anything else. Not really giving her the opportunity.

C. Conclusion

Consistent with other evidence reported in this Study and other Chicago area studies we have conducted, anecdotal interview information strongly suggests that minorities and women continue to suffer discriminatory barriers to full and fair access to RTA and private sector contracts and subcontracts. While not definitive proof that RTA may apply race- and gender-conscious measures to these impediments, the results of the personal interviews are the types of evidence that, especially when considered alongside the numerous pieces of statistical evidence assembled, the courts have found to be highly probative of whether RTA may use narrowly tailored DBE contract goals to address that discrimination.

VII. Recommendations for RTA's Disadvantaged Business Enterprise Program

Based upon the results of the statistical and anecdotal analyses, we make the following recommendations.

. A. Augment Race- and Gender-Neutral Measures

The courts and the DBE program regulations require that grantees use race-neutral¹⁶⁶ approaches to the maximum feasible extent to meet the annual DBE goal. This is a critical element of narrowly tailoring the program so that the burden on non-DBEs is no more than necessary to achieve RTA's remedial purposes. Increased participation by DBEs through race-neutral measures will also reduce the need to set DBE contract goals. We therefore suggest the following enhancements of RTA's current efforts, based on the business owner interviews, the input of agency staff, and national best practices for DBE programs.

- Implement an electronic contracting data collection and monitoring system: Functionality should include: full firm contact information; utilization plan capture; contract compliance, including submission and verification of payments; contract goal setting; outreach tools; spend analysis of informal purchases and contracts; integrated email and fax notifications; access by authorized users; export/import integration with existing systems; and access by authorized RTA staff, prime contractors, and subcontractors.
- Review payment policies and procedures to reduce delays: RTA should review the steps in the payment process to evaluate what can be streamlined to expedite payments. It should also implement an electronic payment system to increase transparency, reduce paperwork burdens, and eliminate the delays resulting from the use of paper invoices and checks. The agency is currently developing additional vendor forms and providing training to project managers and contractors.
- Conduct targeted DBE and prime contractor networking events for RTA projects: RTA participates in outreach and networking events in conjunction with other transportation agencies. Targeted networking events for DBEs and prime contractors for specific RTA projects by industry were urged by owners as one approach to forging relationships.
- Increase agency-wide Program accountability: In addition to the staff responsibilities laid out in RTA's FTA-approved DBE program document,

¹⁶⁶ The term race-neutral as used here includes gender-neutrality.

RTA should consider encouraging other departments, such as the information technology, marketing, and communications functions, to provide additional support to those with program responsibility and accountability.. All RTA staff with procurement responsibilities should receive annual training on the DBE program's policies and procedures and develop program action plans.

- Publicize the annual contracting forecasts: RTA recently began to provide an Annual Procurement Plan that is updated quarterly and published on the website. This new information source should be widely publicized to vendors and DBEs.
- Review contracts to increase contract “unbundling”: “Unbundling” contracts into smaller segments was endorsed by many firm owners as one method to provide fair access to RTA’s projects. Large task order contracts, while easier for the agency to manage, were reported to reduce opportunities for DBEs. Unbundling must be conducted, however, within the constraints of the need to ensure efficiency and limit costs to taxpayers. RTA should continue its present focus on unbundling and look for additional opportunities to utilize this race-neutral method to level the playing field for all small firms.
- Adopt a Small Business Enterprise (SBE) setaside element: RTA should set aside some smaller contracts for bidding only by SBEs as prime contractors. SBE setasides are especially useful for those industries that do not operate on a prime vendor-subcontractor model, such as consulting services. It will also reduce the need to set contract goals to ensure equal opportunities. A SBE element could include additional assistance for the vendors, such as quick pay (*e.g.*, invoicing every two weeks); reduced experience requirements; no holding of retainage, etc. Such an approach is an approved element under 49 C.F.R. § 26.39.

B. Continue to Implement Narrowly Tailored Race- and Gender-Conscious Measures

- Use the study to set the overall annual DBE goal: 49 C.F.R. Part 26 requires that RTA adopt an annual overall goal for DBE participation in its federally-funded projects covering a three year period. This study’s availability estimates in Chapter IV should be consulted to determine the Step 1 base figure for the relative availability of DBEs required by § 26.45(c). It should also form the basis for the DBE goal for state-funded contracts. The statistical disparities in Chapter V in the rates at which DBEs form businesses can serve as the basis for a Step 2 adjustment per § 26.45(d) to reflect the level of DBE availability that would be expected in the absence of discrimination. However, we note that the case law in the

Seventh Circuit Court of Appeals requires the goal for a race-based program to be the “plausible lower bound estimate,” so any adjustment to the Step 1 base figure must be very carefully considered.

- Use the study to set DBE contract goals: The detailed availability estimates in the study should serve as the starting point for contract goal setting. RTA should weigh the estimated scopes of the contract by the availability of DBEs in those scopes as estimated in the study, and then adjust the result based on current market conditions. The electronic system should have a goal setting module and RTA should develop written procedures for use of the goal setting tool. RTA should bid some contracts that it determines have significant opportunities for DBE participation without goals. These “control contracts” can illuminate whether certified firms are used or even solicited in the absence of goals, as suggested by the study data. The development of some unremediated markets data will be probative of whether contract goals remain needed to level the playing field for minorities and women. RTA should further consider listing with the solicitation the scopes of work used to set the contract goal. This would provide guidance to prime firms on specialties on which to concentrate for making good faith efforts, as well as increase transparency about how the DBE program functions.

C. Develop Performance Measures for Program Success

RTA should develop quantitative performance measures for DBEs and overall success of the program to evaluate its effectiveness in reducing the systemic barriers identified by the study. In addition to meeting goals, possible benchmarks might be the number, dollar amounts and industries of bids or proposals for which good faith effort waiver requests are submitted and granted; the number and dollar amounts of bids rejected as non-responsive for failure to make good faith efforts to meet the goal; the number, type, and dollar amount of DBE substitutions during contract performance; growth in the number, size and scopes of work of certified firms; and increased variety of the industries in which DBEs are awarded prime contracts and subcontracts.

Appendix A: Master D/M/WBE Directory

To supplement race and sex information in Dun & Bradstreet/Hoovers used to estimate D/M/WBE availability in Metra's market area, we identified 119 organizations that might have lists of minority, women, and disadvantaged firms. We included national entities and organizations from neighboring states because of the possibility that firms on these lists might be doing business with Metra. These lists were used to supplement data on the race and sex of firms' ownership to improve the accuracy and coverage of race and sex assignments to estimate M/WBE availability.

In addition to the Illinois Unified Certification Program Directory, we obtained lists from the following entities:

- Business Research Services
- Chicago Chinatown Chamber of Commerce
- Chicago Minority Suppliers Development Council
- Chicago Rockford International Airport
- Chicago United
- Chicago Urban League
- City of Chicago
- City of Rockford
- Cook County
- Diversity Information Resources
- DuPage County
- Illinois Department of Central Management Services
- Illinois State Black Chamber of Commerce
- Illinois UCP
- National Organization of Minority Architects
- Small Business Administration/Central Contractor Registry
- Suburban Minority Contractors Association
- Black Contractors United
- Federation of Women Contractors

Hispanic American Construction Industry

Women Construction Owners & Executives

The following entities had relevant lists of D/M/WBES that were duplicates of the lists we obtained:

Abraham Lincoln Capital Airport
Central Illinois Regional Airport
Chicago Midway International Airport
Chicago O'Hare International Airport
Chicago Public Schools
Chicago Transit Authority
Greater Peoria Regional Airport
Illinois Department of Transportation
Illinois Tollway
METRA (Chicago Railway)
Metropolitan Pier and Exposition Authority
University of Illinois
University of Illinois Willard Airport

The following entities either did not have a list of D/M/WBES or the list did not include race and gender information:

American Indian Development Association
Champaign County
Chicago Black Pages
Village of Arlington Heights
City of Cicero
City of Elgin
City of Evanston
City of Joliet
City of Naperville
Village of Schaumburg

City of Waukegan
Decatur Airport
Hispanic Lawyers Association of Illinois
Illinois Hispanic Chamber of Commerce
Joliet Region Chamber of Commerce
Kane County
Kankakee County
Kendall County
Lake County
Marshall County
McHenry County
McLean County
Menard County
National Center of American Indian Enterprise Development
Rock Island County
Society of Taiwanese Americans
Tazewell County
The John Marshall Law School
Vermillion County
Williamson County Regional Airport
Rogers Park Business Alliance
Association of Asian Construction Enterprises
Taiwanese American Professionals Chicago
We were unable to obtain lists from the following entities:
Alliance of Business Leaders & Entrepreneurs
Arab American Bar Association of Illinois
Arquitectos - The Society of Hispanic Professional Architects
Asian American Alliance
Asian American Bar Association of the Greater Chicago Area

Asian American Institute
Asian American Small Business Association
Black Chamber of Commerce of Lake County
Chatham Business Association, Small Business Development
Chicago State University
Chicago Women in Architecture
Aurora Regional Chamber of Commerce
City of Aurora
City of Springfield
Coalition of African American Leaders
Cosmopolitan Chamber of Commerce
Enterpriz Cook County
Hispanic SMB
Illinois Department of Commerce and Economic Opportunity
Indian American Bar Association
MidAmerica St. Louis Airport
National Association of Women Business Owners
National Society of Hispanic MBAs - Chicago Chapter
Puerto Rican Bar Association of Illinois
Puerto Rican Chamber of Commerce
Quad City International Airport
Rainbow Push Coalition International Trade Bureau
Rockford Black Pages
St. Clair County
Tribal Procurement Institute PTAC
Will County
Women's Bar Association
Business Partners - The Chamber for Uptown
Philippine American Chamber of Commerce of Greater Chicago

Korea Business Association

Korean American Association of Chicago

Chicago Korean American Chamber of Commerce

Taiwanese American Chamber of Commerce of Greater Chicago

Taiwanese Chambers of Commerce of North America

Vietnamese American National Chamber of Commerce

West Ridge Chamber of Commerce

Arab American Association for Engineers & Architects

Chicago Minority Business Association

Association of Subcontractors & Affiliates

The following entities declined to provide either their list or the race and gender information in their list:

Aurora Hispanic Chamber of Commerce

Austin Chamber of Commerce

Black Women Lawyers of Greater Chicago, Inc.

Latin American Chamber of Commerce

Women's Business Development Center

African American Contractors Association

Appendix B: Further Explanation of the Multiple Regression Analysis

As explained in the Report, the multiple regression statistical techniques seek to explore the relationship between a set of independent variables and a dependent variable. The following equation is a way to visualize this relationship:

$$DV = f(D, I, O),$$

where DV is the dependent variable; D is a set of demographic variables; I is a set of industry & 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, education and the state of residence 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. An additional factor was included: because of our interest in the impact of race and gender on wages and earnings, we made the assumption that the impact of those variables might vary from state to state (*i.e.*, the impact of being Black on wages is different in Illinois than it is in Alabama). We therefore developed new variables that would show the interaction between race and gender and one particular state. Since this Report examined Illinois, that was the state employed. The coefficient for the new variable showed the impact of being a member of that race or gender in Illinois. Consequently, the impact of race or gender on wages or earnings had two components: the national coefficient and the state-specific impact.

Appendix C: 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 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.¹⁶⁷ However, in the probit model, the initial coefficients cannot be interpreted this way. One additional step - which can be computed easily by most statistical packages - must be undertaken in order to yield a result that indicates how the change in the independent variable affects the probability of an event (*e.g.*, business formation) occurs. For instance, using our previous example of the impact on gender on business formation, if the independent variable was WOMAN (with a value of 0 if the individual was male and 1 if the individual was female) and the final transformation of the coefficient of WOMAN was -0.12, we would interpret this to mean that women have a 12% lower probability of forming a business compared to men.

¹⁶⁷ The exact interpretation depends upon the functional form of the model.

Appendix D: Significance Levels

Many tables in this report contain asterisks indicating a number has statistical significance at 0.001 or 0.01 levels and the body of the report repeats these descriptions. While the use of the term seems important, it is not self-evident what the term means. This appendix provides a general explanation of significance levels.

This report seeks to address the question whether non-Whites and White women received disparate treatment in the economy relative to White males. From a statistical viewpoint, this primary question has two sub-questions:

- What is the relationship between the independent variable and the dependent variable?
- What is the probability that the relationship between the independent variable and the dependent variable is equal to zero?

For example, an important question facing Metra as it explores the necessity of intervening in the marketplace through contract goals to ensure it is not a passive participant in the continuation of historic and contemporary bias is do non-Whites and White women receive lower wages than White men? As discussed in Appendix A, one way to uncover the relationship between the dependent variable (*e.g.*, wages) and the independent variable (*e.g.* non-Whites) is through multiple regression analysis. An example helps to explain this concept.

Let us say this analysis determines that non-Whites receive wages that are 35% 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 is sometimes called the null hypothesis. We then calculate a confidence interval to find or explore the probability that the observed relationship (*e.g.*, -35%) is between 0 and minus that confidence interval.¹⁶⁸ The confidence interval will vary depending upon the level of confidence (statistical significance) we wish to have in our conclusion. Hence, a statistical significance of 99% would have a broader confidence interval than statistical significance of 95%. Once a confidence interval is established, if -35% lies outside of that interval, we can assert the observed relationship (*e.g.*, -35%) is accurate at the appropriate level of statistical significance.

¹⁶⁸ 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 E: Additional Data from the Analysis of the Survey of Business Owners¹⁶⁹

Table E1. Demographic Distribution of Sales and Payroll Data
Construction, 2012

	Total Number of Firms (All Firms)	Sales & Receipts (All Firms) (\$1,000)	Number of Firms with Paid Employees (Employer Firms)	Sales & Receipts Firms with Paid Employees (Employer Firms) (\$1,000)	Number of Paid Employees	Annual payroll (\$1,000)
Panel A: Distribution of Non-White Firms						
Black	5.08%	0.99%	0.96%	0.89%	0.72%	0.64%
Latino	10.42%	2.64%	4.63%	2.27%	2.76%	2.23%
Native American	0.27%	0.08%	0.39%	0.08%	0.18%	0.11%
Asian	1.31%	0.76%	0.80%	0.71%	0.76%	0.68%
Panel B: Distribution of All Firms						
Non-White	17.20%	4.52%	6.87%	3.78%	4.19%	3.50%
White Women	6.90%	7.96%	11.35%	8.23%	10.83%	10.74%
White Men	67.74%	64.30%	67.68%	63.62%	63.63%	62.78%
Equally Non-White & White	0.44%	0.06%	0.60%	0.05%	0.07%	0.04%
Equally Women &	7.20%	6.68%	12.23%	6.56%	7.57%	5.89%
Firms Not	0.52%	16.32%	1.28%	17.37%	13.05%	16.49%
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners

¹⁶⁹ See Footnote 21 for an explanation of the reported value of “S”.

Table E2. Demographic Distribution of Sales and Payroll Data – Aggregated Groups

Professional, Scientific, and Technical Services, 2012

	Total Number of Firms (All Firms)	Sales & Receipts (All Firms) (\$1,000)	Number of Firms with Paid Employees (Employer Firms)	Sales & Receipts Firms with Paid Employees (Employer Firms) (\$1,000)	Number of Paid Employees	Annual payroll (\$1,000)
Panel A: Distribution of Non-White Firms						
Black	5.78%	0.96%	1.70%	0.79%	0.87%	0.67%
Latino	4.93%	1.49%	2.48%	1.37%	1.60%	1.02%
Native American	0.32%	0.07%	0.17%	0.04%	0.07%	0.03%
Asian	7.55%	4.23%	7.23%	4.08%	4.71%	4.12%
Panel B: Distribution of All Firms						
Non-White	18.81%	7.13%	12.00%	6.69%	7.79%	6.21%
White Women	25.87%	5.71%	17.65%	4.57%	6.59%	4.26%
White Men	49.09%	36.32%	59.81%	34.94%	39.81%	35.68%
Equally Non-White & White	0.64%	0.29%	0.72%	0.25%	0.33%	0.18%
Equally Women & Men	4.43%	2.01%	6.02%	1.79%	2.38%	1.51%
Firms Not	1.16%	48.53%	3.80%	51.75%	43.09%	52.16%
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners

Table E3. Demographic Distribution of Sales and Payroll Data – Aggregated Groups

Information, 2012

	Total Number of Firms (All Firms)	Sales & Receipts (All Firms) (\$1,000)	Number of Firms with Paid Employees (Employer Firms)	Sales & Receipts Firms with Paid Employees (Employer Firms) (\$1,000)	Number of Paid Employees	Annual payroll (\$1,000)
Panel A: Distribution of Non-White Firms						
Black	8.81%	0.80%	2.44%	0.76%	0.75%	0.94%
Latino	5.31%	0.23%	1.42%	0.20%	0.23%	0.33%
Native American	0.45%	0.01%	0.03%	S	S	S
Asian	5.25%	0.45%	4.10%	0.41%	0.61%	0.59%
Panel B: Distribution of All Firms						
Non-White	19.07%	1.37%	7.82%	1.26%	1.45%	1.72%
White Women	22.44%	1.42%	13.51%	1.27%	3.00%	1.99%
White Men	48.96%	13.61%	52.51%	13.24%	19.58%	17.56%
Equally Non-White &	0.50%	0.07%	S	S	S	S
Equally Women & Men	4.29%	0.58%	7.21%	0.56%	1.45%	0.75%
Firms Not Classifiable	4.03%	82.82%	18.55%	83.50%	74.24%	77.75%
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners

Table E4. Demographic Distribution of Sales and Payroll Data – Aggregated Groups
Services, 2012

	Total Number of Firms (All Firms)	Sales & Receipts (All Firms) (\$1,000)	Number of Firms with Paid Employees (Employer Firms)	Sales & Receipts Firms with Paid Employees (Employer Firms) (\$1,000)	Number of Paid Employees	Annual payroll (\$1,000)
Panel A: Distribution of Non-White Firms						
Black	16.87%	0.84%	2.38%	0.48%	1.10%	0.69%
Latino	8.78%	1.31%	6.53%	1.08%	2.50%	1.32%
Native American	0.39%	S	0.15%	S	S	S
Asian	6.78%	1.93%	8.75%	S	S	S
Panel B: Distribution of All Firms						
Non-White	32.89%	4.22%	17.87%	3.32%	6.90%	4.12%
White Women	23.75%	3.74%	15.93%	3.03%	5.83%	4.17%
White Men	34.87%	22.11%	48.14%	20.63%	31.23%	27.06%
Equally Non-White & White	0.39%	0.24%	0.49%	0.20%	0.46%	0.26%
Equally Women & Men	5.67%	2.34%	7.85%	1.82%	4.02%	2.42%
Firms Not	2.24%	67.25%	8.66%	70.72%	51.27%	61.60%
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners

Table E5. Demographic Distribution of Sales and Payroll Data – Aggregated Groups

Goods, 2012

	Total Number of Firms (All Firms)	Sales & Receipts (All Firms) (\$1,000)	Number of Firms with Paid Employees (Employer Firms)	Sales & Receipts Firms with Paid Employees (Employer Firms) (\$1,000)	Number of Paid Employees	Annual payroll (\$1,000)
Panel A: Distribution of Non-White Firms						
Black	5.47%	S	0.57%	S	S	S
Latino	7.17%	0.69%	3.48%	0.66%	1.00%	0.69%
Native American	0.36%	S	0.17%	S	S	S
Asian	7.36%	1.44%	9.97%	1.41%	2.04%	1.41%
Panel B: Distribution of All Firms						
Non-White	20.59%	2.34%	14.41%	2.22%	3.31%	3.25%
White Women	25.57%	2.31%	12.84%	2.26%	4.34%	3.63%
White Men	41.31%	21.80%	54.41%	21.56%	34.78%	33.76%
Equally Non-White & White	0.63%	0.04%	0.40%	0.03%	0.09%	0.07%
Equally Women & Men	8.96%	1.66%	10.42%	1.63%	3.49%	2.76%
Firms Not	2.86%	71.80%	7.42%	72.18%	53.89%	57.37%
All Firms	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: CHA calculations from Survey of Business Owners

