



## Workforce Study

# Metropolitan St. Louis Sewer District

Draft Report

Submitted by: Mason Tillman Associates, Ltd.  
December 2012



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# **PREFACE**

## ***I. INTRODUCTION***

The Metropolitan St. Louis Sewer District (MSD) is undertaking the Capital Improvement and Replacement Plan (CIRP), one of the largest construction projects in the St. Louis Region. MSD's CIRP is a \$4.7 billion program to update and rehabilitate the wastewater collection and treatment system. This multi-decade program will reduce community health and safety risks by removing nearly 400 sewer overflows, which release untreated wastewater into the waterways. Interceptors, pump stations and force mains for the seven wastewater treatment plants in MSD's 100-year-old sewer system are also part of the rehabilitation plan. A project of this scale and magnitude will create long-term economic and employment benefits within the region.

MSD is committed to ensuring equal employment opportunities for the City of St. Louis and St. Louis County residents who will fund this program through a utility rate increase beginning July 1, 2012. In order to ensure equity in the employment of MSD's rate payers, MSD commissioned Mason Tillman Associates, Ltd. (Mason Tillman) to establish hiring goals for the employment of minority and female construction workers, apprentices and non-construction supply and service professionals for CIRP-funded contracts. The calculation of the employment goals for construction, apprentice and professional service contracts funded under the CIRP will be based on the availability of minority and female workers in the reasonable recruitment area (RRA) as defined by the U.S. Department of Labor (DOL).

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# **CHAPTER 1: CONSTRUCTION TRADES AND APPRENTICE EMPLOYMENT GOALS**

## **I. OVERVIEW OF THE LOCAL CONSTRUCTION INDUSTRY**

Construction is among the fastest growing industries in the United States according to the United States Department of Labor. Employment projections released February 2012 by the United States Bureau of Labor Statistics (BLS) indicate that one-quarter of all projected occupations are construction-related. The growth in the construction industry is expected to provide 1.8 million construction jobs nationwide by the year 2020.<sup>1</sup>

Construction employment is particularly important to the St. Louis Region because it is a viable avenue for men and women to earn a living wage, which is the minimum wage an individual, must earn to support his or her family. In the St. Louis Region, the living wage for two adults with two dependent children is calculated at \$18.05 per hour.<sup>2</sup> The prevailing wage rate according to the State of Missouri Department of Labor and Industrial Relations for a General Construction Laborer is \$28.87 per hour,<sup>3</sup> which is well over the living wage. MSD projects that 72 percent of workers required on the CIRP construction contracts will be laborers.<sup>4</sup>

Taking into account the BLS's positive employment outlook over the next two decades, the CIRP could contribute significantly to the long-term employment stability and economic viability of the St. Louis Region. In order to ensure that the residents of MSD's service area benefit from the employment opportunities, there must be a plan to achieve adequate participation from the City and the County residents.

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<sup>1</sup> "News Release: Employment Projections 2010-2020 Summary," *United States Bureau of Labor Statistics*, August 9, 2012, <http://bls.gov/news.release/ecopro.nr0.htm>.

<sup>2</sup> "Poverty in America: Living Wage Calculator," *Department of Urban Studies at MIT*, August 9, 2012, <http://livingwage.mit.edu/pages/about>.

<sup>3</sup> "Missouri Division of Labor Standards, Annual Wage Order, No. 19.," August 20, 2012, [http://www.labor.mo.gov/DLS/PrevailingWage/AWO/19\\_WO096.pdf](http://www.labor.mo.gov/DLS/PrevailingWage/AWO/19_WO096.pdf).

<sup>4</sup> Provided by Metropolitan St. Louis Sewer District Department of Engineering, via email correspondence, November 28, 2012.





Expectations for MSD’s contribution to the economic well-being of the region must be tempered by the historical employment practices in the local construction industry. Industry research in the St. Louis Region and various communities nationwide has documented barriers minority and female workers encounter in penetrating the construction industry. Accounts of overt and covert racism in the construction industry have been the status quo.<sup>5</sup> An analysis of acceptance, graduation and placement rates in construction trades and apprentice hiring indicate barriers confronting minorities and females entering the field.<sup>6,7</sup> The failure to recruit and retain young workers, especially minority and female workers, has led to a predominance of older workers in the field, who are now nearing retirement age.<sup>8</sup>

In addition to accounts of racism and sexism in the St. Louis Region,<sup>9</sup> anecdotal testimony from minority apprentices and tradespersons within the State of Missouri suggests that the construction industry has been considered a closed field driven by established relationships built over time. This poses barriers for newcomers seeking entry. In the construction industry, there has been a long-standing history of informal and unregulated job placement, poorly publicized employment opportunities, and union-managed recruitment and acceptance standards. These practices have effectively functioned to shut out minorities and females. As a result, minorities and females who break into the field face a different set of challenges and barriers upon entry.<sup>10</sup>

Additionally, irregular and unregulated practices can be hindrances to hiring, promotion and advancement within the industry. Job placements in the industry occur by three primary means—self-placement, referrals and special requests also known as “name calls.” Self-placement is the process by which a tradesperson or apprentice finds a contractor willing to hire him or her. Referral is the process by which tradespersons are referred to contractors looking for workers. In referring tradespersons to contractors, unions utilize a priority system based on length of time with the union, length of unemployment and test scores. Finally, “name call” is the process by which the contractor calls a union to ask for a tradesperson or apprentice by name. As previously noted, these processes are loosely regulated, relationship-based, and pose opportunity for misuse.<sup>11</sup> These methods often leave minorities and females as the last hired when employment opportunities arise, hired for jobs that do not match their skill level, or hired for assignments in undesirable or remote locations.

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<sup>5</sup> “St. Louis Construction Industry Study,” *Public Policy Research Center University of Missouri – St. Louis*, 2012.

<sup>6</sup> *Id.*

<sup>7</sup> “City of Kansas City, Missouri Construction Industry Employment Study,” *Mason Tillman Associates, Ltd.*, June 2006.

<sup>8</sup> *Id.*

<sup>9</sup> “Construction Task Force Meeting Report: A Supplement to the St. Louis Construction Industry Study,” *Public Policy Research Center University of Missouri – St. Louis*, 2012.

<sup>10</sup> “City of Kansas City, Missouri Construction Industry Employment Study,” *Mason Tillman Associates, Ltd.*, June 2006, 4-12.

<sup>11</sup> *Id.*



Current trends show a decreased interest of Caucasian males in entering the construction trades,<sup>12</sup> coupled with a steady decline of Caucasians in MSD's service area. Given the high number of minority public high school graduates in the St. Louis Region,<sup>13</sup> the pool of available residents minimally qualified for construction employment is increasingly non-Caucasian Male. Individuals remaining in the low-skill classification are potential candidates for training and employment within the construction labor force. These individuals could serve as a source for CIRP-sponsored new employment opportunities.

While construction is an industry which traditionally has been predominantly Caucasian and male, U.S. Census data indicate that the available workforce 18 years and older with a high school diploma or equivalency is increasingly minority and female, as presented in the availability analysis. Figure 1.01 illustrates the demographic shift characterizing the MSD service area. Decennial data from the 2000 and 2010 U.S. Census show drastic changes in the City of St. Louis and St. Louis County demographic composition.<sup>14</sup> Both the City of St. Louis and St. Louis County experienced a marked decline in their Caucasian residents, decreasing eight percent and 10 percent respectively. Conversely, both geographical areas experienced a surge in Hispanic American and Asian American residents. The Hispanic American population increased the most during this decade. According to the 2010 U.S. Census, the Hispanic American population grew 58.5 percent in the City of St. Louis and 71.67 percent in St. Louis County. The Asian American population increased by 34.83 percent in the City of St. Louis and 53.04 percent in St. Louis County.

In contrast, during the same time frame, the African American population in the City of St. Louis witnessed a nearly 12 percent (11.84) decline while African Americans residing in the County increased by 20 percent. U.S. Census data also show Caucasian residents have swelled in the adjacent counties of St. Charles, Lincoln and Warren, Missouri. In summation, these trends, when examined with minimum education requirements and civilian workforce statistics, indicate the need to establish a sustainable conduit to produce minority and female apprentices for entry into the construction trades. Also implicit is the need to resolve the institutional issues affecting the recruitment and retention of minority and female construction laborers in both the trades and apprenticeship programs.



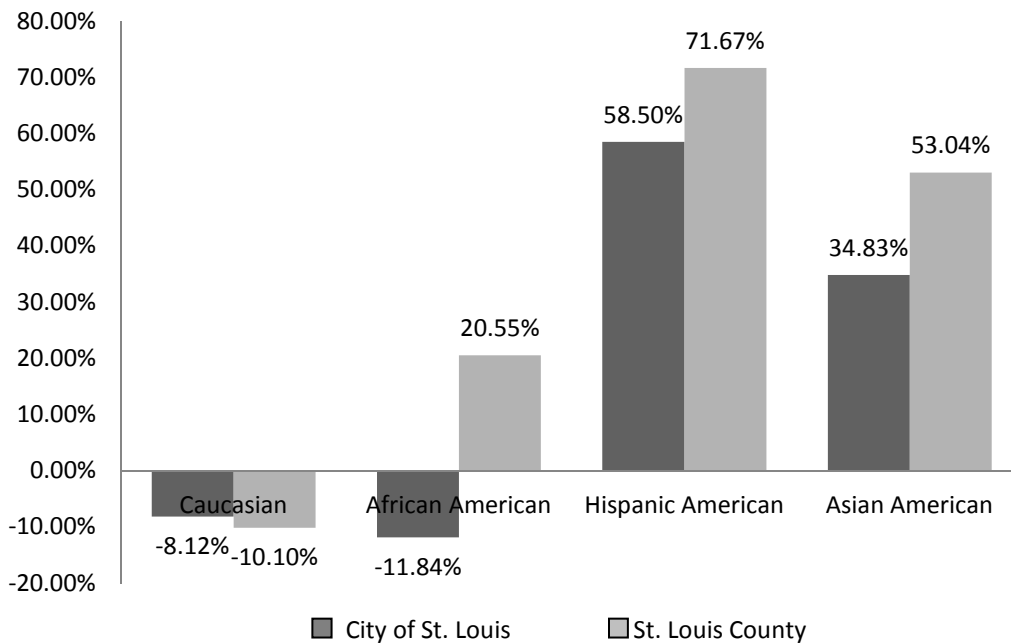
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<sup>12</sup> "St. Louis Construction Industry Study," *Public Policy Research Center University of Missouri – St. Louis*, 2012.

<sup>13</sup> Data will be presented in the Availability Analysis.

<sup>14</sup> Data are from the 2010 American Community Survey, which is a statistical survey administered by the US Census Bureau, which annually samples three million Americans over the age of 15.

**Figure 1.01: MSD Service Area Population Percent Change 2000-2010**



Over the next 20 years, the CIRP will require a sustainable source of trained construction workers to meet current and projected employment levels on its contracts. To facilitate unobstructed access to construction employment, MSD has made a commitment, grounded in evidence-based policy recommendations, to eliminate barriers that have historically limited minority and female access to construction employment. To increase minority and female participation on construction contracts associated with the CIRP, MSD has committed to instituting policies that address issues of access to construction career preparation programs and job placement. The methodology in setting hiring goals for hiring apprentices and tradespersons on MSD’s construction contracts is derived from federal standards.



## **II. LEGAL FRAMEWORK**

The standard for setting the minority and female employment goals for the construction trades and apprentices is derived from the methodology set forth in Executive Order (Order) 11246 and the Code of Federal Regulations. The Order is the required standard for setting employment goals when a project is federally funded. The National Apprenticeship Act (Act) and 29 CFR Parts 29 and 30 are the standards for the Apprentice goal setting. Local goals are not subject to federal laws.

There is no mandate for MSD to use the federal standard for calculating employment goals because the CIRP is funded through user fees and bonds and federal financial support is not anticipated. However, the federal standards are the best available tool for setting employment goals. They are rigorous and can produce defensible numerical goals for hiring tradespersons and apprentices for the CIRP construction contracts.

### **A. Legal Framework for Setting Construction Employment Goals**

The Order, as amended in 1967, prohibits discrimination based on race, color, religion, sex, national origin, disability, or covered veteran status in the employment of construction workers on federal or federally-assisted construction contracts. The Order charged the Secretary of the United States Department of Labor (DOL) with the responsibility of adopting implementation rules and regulations. The equal opportunity and affirmative action clauses in 41 CFR Part 60-1.4(a) and (b), 41 CFR Part 60-250.4, and 41 CFR Part 60-741.4 established standards for setting goals for minority and female construction workers. The regulations also stipulate the affirmative action steps required to ensure compliance with the non-discrimination provision of the Order. Under the Order, the numerical goals are not intended to create set-asides for minorities or females, but rather, to measure the effectiveness of affirmative action efforts to prevent further discrimination in the industry.

The initial minority and female construction employment goals were tabulated from the 1970 Census. The goals were published by the DOL in the Federal Register on October 3, 1980, 45 FR 65979, 65984, as Appendix B-80 and December 30, 1980, 45 FR 85750, 85751. The minority construction employment goals were representative of the minority male and female percentages in the Civilian Labor Force<sup>15</sup> within either the Standard Metropolitan Statistical Area (SMSA) or the Economic Area (EA)<sup>16</sup> SMSAs are geographical areas defined by the United States Office of Management and Budget, and are based on population, non-agricultural employment, population density, and commuting patterns. The EA was used in geographical areas that SMSA data was not available. EAs

<sup>15</sup> Consists of the employed and the experienced unemployed who are not in the military or institutionalized.

<sup>16</sup> "United States Department of Labor, Employment Standards Administration," *Office of Federal Contract Compliance Programs*, 1980.



are defined by the United States Department of Commerce and represent areas that include the places of work and residence for most workers.<sup>17</sup> There are 183 SMSAs defined along county lines covering the entire country in accordance with commuting patterns based on U.S. Census Bureau data.<sup>18</sup> MSD's SMSA is comprised of the following counties: Clinton, IL; Madison, IL; Monroe, IL; St. Clair, IL; Franklin, MO; Jefferson, MO; St. Charles, MO; St. Louis, MO; and St. Louis City, MO. The minority construction employment goal for MSD's relevant SMSA (St. Louis, MO-IL) was calculated in 1980 as 14.7 percent. The 6.9 percent female construction employment goal, set in 1980 pursuant to 41 CFR Part 60-4.6, is a national standard, not based on either SMSA or EA data. The 6.9 percent female employment goal was extended indefinitely in 1980.

Although the Office of Federal Contract Compliance Programs (OFCCP) has not updated the minority or female employment goals originally published in 1980, the regulations permit local governments to establish higher minority and female construction employment goals.<sup>19</sup> In accordance with the OFCCP's Technical Assistance Guide for Federal Construction Contractors (OFCCP Guide), agency-specific goals for minority and female construction employment should be based on the availability of the appropriate workforce.<sup>20</sup> The OFCCP Guide is the standard adhered to in setting employment goals for the CIRP construction contracts.

The State of Missouri also has affirmative action standards for minority and female construction employment. The Governor's Executive Order No. 94-03 was enacted in 1994. Article XIII of the Executive Order requires that all construction contracts entered into with the State contain a clause prohibiting discriminatory practices. Article XIII also requires contractors who employ at least 50 persons to maintain an affirmative action program. While contractors are not required to attain minority utilization goals to receive state funds, they are required to establish non-discriminatory selection standards for hiring minority workers. All local governments within the State of Missouri are requested to cooperate with the standards set forth in the Executive Order.<sup>21</sup>

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<sup>17</sup> "The BEA Economic Areas: Structural Changes and Growth 1950- 73," *Survey of Current Business*. November 11, 1975.

<sup>18</sup> *Id.*

<sup>19</sup> "United States Department of Labor, Employment Standards Administration," *Office of Federal Contract Compliance Programs, Technical Assistance Guide for Federal Construction Contractors*, E-1.

<sup>20</sup> 41 CFR Part 60-4.6.

<sup>21</sup> "Executive Order No. 94-03," *Missouri Secretary of State*, December 14, 2012, [http://www.sos.mo.gov/library/reference/orders/1994/eo94\\_003.asp](http://www.sos.mo.gov/library/reference/orders/1994/eo94_003.asp)



## **B. Legal Framework for Setting Apprenticeship Employment Goals**

Apprenticeship programs have long been recognized as the primary entry into the construction trades. The National Apprenticeship Act (Act), promulgated in 1937, was enacted to secure apprentice benefits and to safeguard apprentices' welfare. Regulations to implement the Act (29 USC 50) were set forth in 29 CFR Part 29. Regulations regarding discrimination in apprentice programs were set forth in 29 CFR Part 30.

The United States Department of Labor Office of Apprenticeship (OA) is the federal agency responsible for the administration of the National Apprenticeship System. The OA regulates and standardizes training and also provides technical assistance to potential and current sponsors of apprentice training programs. On a voluntary basis, joint employers, labor groups, individual employers, employee associations, and educational institutions request inclusion by the OA as a registered apprentice training program. Specific credentials and admission requirements are set by the program sponsor, but those requirements must be aligned with industry standards and approved by the OA under the Employment and Training Administration (ETA). Requirements vary based upon the specific trade and the sponsor; however, most sponsors minimally require applicants to be at least 18 years of age (16 years of age for some occupations) and have a high school diploma or equivalency. Once sponsors are approved by the OA, programs can offer a combination of earn-while-you-learn on-the-job-training and classroom instruction to prepare students to become tradespersons in their respective occupation. Apprentices who graduate from OA-certified programs become qualified tradespersons.<sup>22</sup>

In addition, 29 CFR Part 30.4 requires the adoption of an Affirmative Action Plan (AAP).<sup>23</sup> The plan is intended to go beyond passive nondiscrimination and must include procedures, methods, and programs for the active recruitment of minorities and females into apprentice training programs.<sup>24</sup> An AAP should also provide adequate outreach and recruitment with the expressed interest of increasing minority and female apprentice participation.

Affirmative action steps listed in the regulations include a process to disseminate apprentice program admission requirements, available opportunities and application procedures, participation in workshops and employment services. The process should also include cooperation with school boards, vocational systems, and internal structuring to support institutional buy-in. The range of services under the affirmative action program can be dependent on the size and available resources of the program sponsor.



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<sup>22</sup> "What is a registered apprentice?" *United States Department of Labor Employment and Training Administration*, September 17, 2012, <http://www.doleta.gov/OA/apprenticeship.cfm>.

<sup>23</sup> 29 CFR Part 30.4 – Equal Opportunity in Apprenticeship and Training

<sup>24</sup> *Id.*

## **C. Legal Framework for Setting Local Employment Goals**

For local hiring programs, the legal principle is the rational basis standard. Local goals are not subject to federal laws nor is there a federal standard for formulating local hiring goals.<sup>25,26</sup> Nevertheless, these goals are increasingly being promulgated by local governments to support efforts to increase the employment of residents on public works projects, reduce the level of local unemployment, and invest in the local economy. In some locales, community benefit programs are components of major development programs or public improvement projects, and others are enacted as state or local policy and applied to the jurisdictions' entire public works program.

## **III. METHODOLOGY**

### **A. Overview of the Methodology for Availability Analysis**

In accordance with the Order, the workforce goals should reflect of the demographic composition of the available labor pool in the reasonable recruitment area (RRA). The RRA is the area MSD's contractors can reasonably recruit workers. This area has been defined as MSD's service area and encompasses the City of St. Louis and St. Louis County. The numbers derived from analyzing workforce demographic data in the RRA are referred to as availability; the employment goals for both construction hiring and apprentice hiring will be based on these data (and expressed as a percentage of the project work hours). A relevant workforce refers to workers who meet the minimum requirements to perform work in the trades for which there is expected work; these trades are depicted in Table 1.01. The minimum requirements to enter these trades are age and education. The analysis to determine the available workforce, calculate employment goals and define the affirmative steps to achieve the goals consists of the following tasks:

- Identification of Availability Data Sources
- Identification of Relevant Construction Trades
- Analysis of Workforce Availability
- Formulation of Employment Goals
- Recommendations



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<sup>25</sup> Such employment goals are not without precedent in Missouri. The Missouri Department of Transportation (MoDOT) used local hiring goals in 2006 for its \$535 million highway construction project.

<sup>26</sup> "Going Regional: Community-Based Regionalism, Transportation and Local Hiring Agreements," *Berkeley Institute of Regional Development*, October 2007, 14-18.

## **B. Availability Data Sources**

As mandated by OFCCP, 41 CFR Part 60-4, available construction worker labor pool must minimally be derived from the U.S. Census Civilian Labor Force data.<sup>27</sup> However, in order to obtain a more targeted accounting of availability, three additional datasets which describe the Civilian Labor Force by level of educational attainment have also been analyzed. Thus, the Civilian Labor Force data was reviewed in conjunction with individuals employed in construction, highest level of educational attainment for the population age 18 and older, high school graduation rates, and post-secondary program enrollment. These datasets and their relevance are defined below:

### **1. Civilian Labor Force**

The Civilian Labor Force data were obtained from the United States Census Bureau American Community Survey 2010 (ACS 2010) Table B23001 titled, “Sex by Age by Employment Status for the Population 16 Years and Over.”

The U.S. Census defines the Civilian Labor Force as the total number of employed and unemployed individuals over the age of 16, who are not members of the armed services or institutionalized in correctional facilities, mental health facilities, or residential facilities for the aged or chronically ill. Civilian employment includes all individuals who worked at least one hour for a wage or salary, were self-employed, or worked at least 15 unpaid hours for a family business or farm during the week. Civilian unemployment includes individuals who did not seek employment but were able, and those who actively sought work during the week.

This data source was used because it is the primary source on which employment goal setting is predicated.<sup>28</sup> The Order stipulates that employment goals are to be based on the availability of applicants in the job market, and defines the Civilian Labor Force data as the most comprehensive and current accounting of a local labor force. The Civilian Labor Force data are reported by ethnicity and gender.

### **2. Individuals Employed in Construction Occupations**

Data for individuals employed in construction occupations were obtained from ACS 2010 Table B24010, titled, “Sex by Occupation for the Civilian Employed Population 16 years and Over.” These data are also presented by ethnicity and gender. The occupation data in ACS 2010 were compiled from the American Community Survey, a statistical survey administered by the United States Census Bureau, which annually samples three million Americans over the age of 15 who have worked in the past five years. Questions 41

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<sup>27</sup> OFCCP has established utilization goals based on Civilian Labor Force participation rates.

<sup>28</sup> OFCCP established utilization goals based on Civilian Labor Force participation rates, <http://www.dol.gov/ofccp/TAGuides/consttag.htm>





through 46 ask respondents about work activities and occupational experiences for their current or most recent job.<sup>29</sup>

These data were used to determine the gender and ethnic composition of individuals that self-reported construction as their current or most recent job. As a subset of the Civilian Labor Force data, this dataset provides information on the percentage of workers in the Civilian Labor Force who work in the construction industry and are therefore minimally qualified to perform on CIRP contracts.

### **3. Individuals with a High School Diploma or GED as Highest Level of Educational Attainment**

Data on individuals with a High School Diploma or General Education Diploma (GED) as highest level of educational attainment were obtained from the ACS 2010 Table B15001, titled “Sex by Age by Educational Attainment for the Population 18 Years and over.” The majority of construction trades require individuals to be 18 years or older and have a high school diploma or equivalency; therefore, an analysis of the age and educational attainment of residents in the City of St. Louis and St. Louis County provides a reasonable approximation of the number of individuals within the Civilian Labor Force who are minimally eligible to enter construction training and employment. These data are also presented by ethnicity and gender.

### **4. Construction Apprentice Graduates**

Data on recent construction apprentice graduates from eight trade programs relevant to the CIRP were requested from program sponsors. Program coordinators were asked to provide registration, graduation and retention information for residents of the City of St. Louis and St. Louis County. The data was requested by ethnicity and gender for cohorts with projected completion dates of 2011 and 2012. All programs complied with the request; however, data was not disaggregated into racial and gender categories. Data for current graduates was not obtained, therefore, no inferences regarding attrition and retention could be made. The responses are included as an Appendix of this Report for informational purposes only.

## ***C. Relevant Construction Trades***

MSD identified carpenters, construction laborers, cement masons, electricians, operating engineers/equipment operators, painters, plumbers/pipefitters, and structural steel/ironworkers as the construction trades relevant to the CIRP. Table 1.01 presents the United States Bureau of Labor Statistics (BLS) definitions of these eight trades.



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<sup>29</sup> “The American Community Survey,” U.S. Census Bureau, December 2, 2012, <http://www.census.gov/acs/www/Downloads/questionnaires/2012/Quest12.pdf>

**Table 1.01: Definitions of CIRP-Relevant Construction Trades**

Construction Trade	Bureau of Labor Statistics Definition
Carpenters	Construct, erect, install, or repair structures and fixtures made of wood, such as concrete forms; building frameworks, including partitions, joists, studding, and rafters; and wood stairways, window and door frames, and hardwood floors. Includes brattice builders who build doors or brattices (ventilation walls or partitions) in underground passageways.
Construction Laborers	Perform tasks involving physical labor at construction sites. May operate hand and power tools of all types: air hammers, earth tampers, cement mixers, small mechanical hoists, surveying and measuring equipment, and a variety of other equipment and instruments. May clean and prepare sites, dig trenches, set braces to support the sides of excavations, erect scaffolding, and clean up rubble, debris and other waste materials. May assist other craft workers.
Cement Masons	Smooth and finish surfaces of poured concrete, such as floors, walks, sidewalks, roads, or curbs using a variety of hand and power tools. Align forms for sidewalks, curbs, or gutters; patch voids; and use saws to cut expansion joints.
Electricians	Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes. May install or service street lights, intercom systems, or electrical control systems.
Operating Engineers/Equipment Operators	Operate one or several types of power construction equipment, such as motor graders, bulldozers, scrapers, compressors, pumps, derricks, shovels, tractors, or front-end loaders to excavate, move, and grade earth, erect structures, or pour concrete or other hard surface pavement. May repair and maintain equipment in addition to other duties.
Painters	Paint walls, equipment, buildings, bridges, and other structural surfaces, using brushes, rollers, and spray guns. May remove old paint to prepare surface prior to painting. May mix colors or oils to obtain desired color or consistency.
Plumbers/Pipefitters	Assemble, install, alter, and repair pipelines or pipe systems that carry water, steam, air, or other liquids or gases. May install heating and cooling equipment and mechanical control systems. Includes sprinkler fitters.
Structural Steel/Ironworkers	Raise, place, and unite iron or steel girders, columns, and other structural members to form completed structures or structural frameworks. May erect metal storage tanks and assemble prefabricated metal buildings.



Table 1.02 illustrates the MSD-estimated levels of usage by trade for the CIRP. As shown, construction laborers account for the overwhelming majority (72 percent) of tradespersons needed. MSD anticipates moderate usage of carpenters, electricians, equipment operators, and pipefitters/plumbers, which together represent 23 percent of the workers needed. The lowest estimated usage is for cement masons, painters, and structural steel workers. These three trades are projected to account for only five percent of the workers.

**Table 1.02: Construction Trades Employed in MSD’s CIRP Contracts**

Construction Trade	Projected Use	Volume of Usage
Construction Laborers	High	72%
Carpenters	Moderate	23%
Electricians	Moderate	
Operating Engineers/Equipment Operators	Moderate	
Pipefitters	Moderate	
Plumbers	Moderate	
Cement Masons	Low	5%
Painters	Low	
Structural Steel/Ironworkers	Low	

Source: St. Louis Metropolitan Sewer District



## **IV. WORKFORCE AVAILABILITY ANALYSIS**

The purpose of the availability analysis is to determine the number of potential minority and female construction workers residing in MSD’s service area. Minimally, individuals need to be over age 18, with a high school diploma or equivalency. As required by Executive Order 11246, the initial analysis was performed using Civilian Labor Force in the City of St. Louis and St. Louis County.

### **1. Civilian Labor Force**

Table 1.03 illustrates the total Civilian Labor Force by ethnicity and gender in the City of St. Louis. These figures from the 2010 American Community Survey show that the gender composition is nearly equal, at 49.84 percent male and 50.16 percent female. Minorities account for 48.84 percent of the City of St. Louis Civilian Labor Force. African Americans are the largest minority group, representing 42.65 percent of the City of St. Louis Civilian Labor Force. Hispanic Americans account for 3.35 percent of the City’s Civilian Labor Force. And Asian Americans are the smallest minority group, representing 2.84 percent of the City of St. Louis Civilian Labor Force.

**Table 1.03: City of St. Louis Civilian Labor Force**

<b>Ethnicity and Gender</b>	<b>Number</b>	<b>Percentage</b>
Caucasian Males	45,953	27.09%
Caucasian Females	40,829	24.07%
African American Males	32,573	19.2%
African American Females	39,778	23.45%
Asian American Males	2,496	1.47%
Asian American Females	2,318	1.37%
Hispanic American Males	3,522	2.08%
Hispanic American Females	2,150	1.27%
<b>TOTAL</b>	<b>169,619</b>	<b>100.00%</b>

Source: US Census 2010 American Community Survey



Table 1.04 illustrates the total Civilian Labor Force by ethnicity and gender in St. Louis County. These figures from the 2010 American Community Survey show that the gender composition is nearly equal at 50.49 percent male and 49.51 percent female. Minorities account for 27.5 percent of the St. Louis County Civilian Labor Force. African Americans are the largest minority group, representing 21.69 of the St. Louis County Civilian Labor Force. Asian Americans account for 3.4 percent of the County’s Civilian Labor Force. And Hispanic Americans are the smallest minority group, representing 2.4 percent of the St. Louis County Civilian Labor Force.

**Table 1.04: St. Louis County Civilian Labor Force**

<b>Ethnicity and Gender</b>	<b>Number</b>	<b>Percentage</b>
Caucasian Males	201,723	37.90%
Caucasian Females	184,159	34.60%
African American Males	49,281	9.26%
African American Females	66,185	12.43%
Asian American Males	10,231	1.92%
Asian American Females	7,887	1.48%
Hispanic American Males	7,510	1.41%
Hispanic American Females	5,288	0.99%
<b>TOTAL</b>	<b>532,264</b>	<b>100.00%</b>

Source: US Census 2010 American Community Survey



## 2. Ethnicity and Gender of construction Workforce

These data indicate the ethnic and gender composition of those who are ready at-present to engage in construction employment.

Table 1.05 illustrates the composition of construction workers in the City of St. Louis by ethnicity and gender. Data from the 2010 American Community Survey show that one-third of construction workers in St. Louis are African American males and females (33.36 percent); the remaining two-thirds are Caucasian males and females, who represent 64.82 percent. Asian American and Hispanic American construction workers were not reported separately due to the small number of responses in the sample.

**Table 1.05: City of St. Louis Composition of Construction Workers by Ethnicity and Gender**

Ethnicity and Gender	Construction Workers	Percentage of Construction Workforce
Caucasian Male	3,070	59.82%
Caucasian Female	256	5%
African American Male	1,629	31.74%
African American Female	83	1.62%
Asian American Male	*	*
Asian American Female	*	*
Hispanic American Male	*	*
Hispanic American Female	*	*
<b>TOTAL</b>	<b>5,038</b>	<b>98.18%</b>

Source: US Census 2010 American Community Survey

\*Data not available due to the small number of cases in the sample



Table 1.06 illustrates the composition of construction workers in St. Louis County by ethnicity and gender. Data from the 2010 American Community Survey show that the St. Louis County construction workforce is overwhelmingly Caucasian, representing 85.61 percent. Minorities account for 18.09 percent of construction workers in St. Louis County. African Americans are the largest minority group and constitute 12.02 percent of the County's workforce. Hispanic Americans represent 5.25 percent of the County's construction workforce. And Asian Americans are the smallest minority group, representing 0.82 percent of the St. Louis County construction workforce.

**Table 1.06: St. Louis County Composition of Construction Workers by Ethnicity and Gender**

Ethnicity and Gender	Construction Workers	Percentage of Construction Workforce
Caucasian Male	12,648	83.67%
Caucasian Female	294	1.94%
African American Male	1,727	11.42%
African American Female	91	0.60%
Asian American Male	124	0.82%
Asian American Female	0	0.00%
Hispanic American Male <sup>30</sup>	774	5.12%
Hispanic American Female <sup>31</sup>	19	0.13%
<b>TOTAL</b>	<b>15,677</b>	<b>103.7%**</b>

Source: US Census 2010 American Community Survey

\*\* Sample includes all Hispanics regardless of race; therefore, the total percentage exceeds 100 percent



<sup>30</sup> The race and Hispanic origin categories used by the Census Bureau uses four race categories (White, Black, American Indian and Alaska Native, Asian and Pacific Islander) and two ethnicity categories (Hispanic, non-Hispanic). This means that within the federal system everyone is classified as both a member of one of the four race groups and also as either Hispanic or non-Hispanic. <http://www.census.gov/population/estimates/rho.txt>

<sup>31</sup> *Id.*

Tables 1.07 and 1.08 illustrate the total number of construction workers by gender in the City of St. Louis and St. Louis County for the trades relevant to the CIRP. Ethnic-specific data were not available. Data for carpenters, electricians, painters, plumbers and construction laborers are shown. Disaggregated data for the remaining relevant trades were not available. Therefore, “construction trades workers” includes operating engineers/equipment operators, cement masons, and structural steel/ironworkers. Additionally, “other construction workers and helpers” are included because many of the relevant construction trades have helpers who assist tradesmen.

In comparison to the general the City of St. Louis construction data presented in Table 1.06, the data presented in Table 1.07 show that in trades relevant to the CIRP, female participation is much lower than the general construction workforce. Females represent one percent of the workforce in CIRP-relevant trades compared to 6.73 percent of the City of St. Louis general construction workforce. Additionally, in the City of St. Louis, the only CIRP relevant trade with documented female participation is “other construction workers and helpers.”

**Table 1.07: City of St. Louis Construction Workers by Trade**

Relevant Occupation	Male Workers	Percentage of CIRP Relevant Workforce	Female Workers	Percentage of CIRP Relevant Workforce
Construction Laborers	971	22.02%	0	0.00%
Carpenters	1,084	24.59%	0	0.00%
Electricians	158	3.58%	0	0.00%
Pipelayers, plumbers, pipefitters, steamfitters	369	8.37%	0	0.00%
Construction trades workers	467	10.59%	0	0.00%
Painters and paperhangers	953	21.61%	0	0.00%
Other construction workers and helpers	364	8.26%	43	0.98%
<b>TOTAL</b>	<b>4,366</b>	<b>99.02%</b>	<b>43</b>	<b>0.98%</b>

Source: US Census 2010 American Community Survey





In comparison to the St. Louis County general construction data presented in Table 1.07, the data presented in Table 1.08 show in trades relevant to the CIRP, female participation closely resembles the general construction workforce. Females represent two percent of the St. Louis County CIRP-relevant construction workforce compared to 2.58 percent of the St. Louis County general construction workforce.

**Table 1.08: St. Louis County Construction Workers by Trade**

Relevant Occupation	Male Workers	Percentage of CIRP Relevant Workforce	Female Workers	Percentage of CIRP Relevant Workforce
Construction Laborers	2,304	18.63%	0	0.00%
Carpenters	3,047	24.64%	49	0.40%
Electricians	1,450	11.73%	84	0.68%
Pipelayers, plumbers, pipefitters, steamfitters	1,618	13.09%	63	0.51%
Construction trades workers	1,755	14.19%	63	0.51%
Painters and paperhangers	1,333	10.78%	0	0.00%
Other construction workers and helpers	599	4.84%	0	0.00%
<b>TOTAL</b>	<b>12,106</b>	<b>97.91%</b>	<b>259</b>	<b>2.09%</b>

Source: US Census 2010 American Community Survey



### 3. High School as the Highest Level of Education Attainment

Individuals who have only earned a high school diploma or its equivalent are minimally qualified to enter the construction industry. It can be assumed that these individuals are more likely to pursue a career in construction than high school graduates who pursue post-secondary education.

Table 1.09 illustrates the numbers of individuals in the City of St. Louis aged 18 years or older with a high school diploma or equivalency as the highest level of educational attainment by ethnicity and gender. These figures from the 2010 American Community Survey show that African Americans constitute the highest percentage of individuals (55.74 percent) with a high school diploma or equivalency who have not obtained a college degree, followed by Caucasians who account for 40.17 percent. Hispanic Americans constitute 2.64 percent of those with a high school diploma or equivalency. And Asian Americans have the smallest representation of individuals with a high school diploma or equivalency who have not obtained a college degree at 1.45 percent.

**Table 1.09: City of St. Louis Individuals with Only a High School Diploma or Equivalency**

Ethnicity and Gender	Number	Percentage
Caucasian Males	13,685	20.06%
Caucasian Females	13,717	20.11%
African American Males	17,916	26.26%
African American Females	20,110	29.48%
Asian American Males	525	0.77%
Asian American Females	463	0.68%
Hispanic American Males	1,019	1.49%
Hispanic American Females	783	1.15%
<b>TOTAL</b>	<b>68,218</b>	<b>100.00%</b>

Source: US Census 2010 American Community Survey



Table 1.10 illustrates the numbers of individuals in St. Louis County aged 18 years or older with a high school diploma or equivalency as the highest level of educational attainment by ethnicity and gender. These figures from the 2010 American Community Survey show that Caucasians account for 69.26 percent of individuals in St. Louis County with a high school diploma or equivalency who have not obtained a college degree. African Americans are the largest minority group, representing 26.88 percent of individuals with a high school diploma or equivalency only. Hispanic Americans and Asian Americans are nearly equal, representing 1.97 percent and 1.88 percent respectively of individuals with only a high school diploma or equivalency only.

**Table 1.10: St. Louis County Individuals with Only a High School Diploma or Equivalency**

<b>Ethnicity and Gender</b>	<b>Number</b>	<b>Percentage</b>
Caucasian Males	54,819	30.18%
Caucasian Females	70,980	39.08%
African American Males	23,110	12.72%
African American Females	25,716	14.16%
Asian American Males	1,457	0.80%
Asian American Females	1,967	1.08%
Hispanic American Males	1,721	0.95%
Hispanic American Females	1,854	1.02%
<b>TOTAL</b>	<b>181,624</b>	<b>100.00%</b>

Source: US Census 2010 American Community Survey



#### 4. 2011 and 2012 Public High School Graduates

These data provide a baseline of individuals by ethnicity and gender whose educational readiness minimally situates them as qualified for construction apprenticeship.

Table 1.11 illustrates the number of individuals by ethnicity who graduated from public high school in the City of St. Louis in 2011 and 2012. This data from the Comprehensive Data System of the Missouri Department of Elementary and Secondary Education (DESE)<sup>32</sup> show that the number of the City of St. Louis public high school graduates in 2011 and 2012 is overwhelmingly minority. African Americans constitute the largest minority group, representing 84.18 percent of 2011 graduates and 83.55 percent of 2012 graduates. Asian Americans constitute 2.08 percent of 2011 graduates and 3.29 percent of 2012 graduates. Hispanic Americans constitute 2.3 percent of 2011 graduates and 1.73 percent of 2012 graduates.

**Table 1.11: City of St. Louis 2011 and 2012 Public High School Graduates**

Ethnicity	Number of HS Graduates 2011	Percentage	Number of HS Graduates 2012	Percentage
Caucasian	214	11.44%	201	11.62%
African Americans	1,575	84.18%	1,442	83.35%
Asian Americans	39	2.08%	57	3.29%
Hispanic Americans	43	2.30%	30	1.73%
<b>TOTAL</b>	<b>1,871</b>	<b>100.00%</b>	<b>1,730</b>	<b>100.00%</b>

Source: Missouri Department of Elementary and Secondary Education



<sup>32</sup> The Missouri Department of Elementary and Secondary Education (DESE) is the administrative arm of the Missouri State Board of Education. DESE does not regulate, monitor or accredit private, parochial or home schools.

Table 1.12 illustrates the number of individuals by ethnicity who graduated from public high school in St. Louis County in 2011 and 2012. These figures from the Comprehensive Data System of the Missouri Department of Elementary and Secondary Education (DESE)<sup>33</sup> show that in St. Louis County Caucasians represent 55.9 of 2011 graduates and 57.25 percent of 2012 graduates. African Americans are the largest minority group, representing 38.66 percent of 2011 graduates and 36.94 percent of 2012 graduates. Asian Americans constitute 3.42 percent of 2011 graduates and 3.54 percent of 2012 graduates. Hispanic Americans are the smallest minority group, representing 2.02 of 2011 graduates and 2.27 percent of 2012 graduates.

**Table 1.12: St. Louis County 2011 and 2012 Public High School Graduates**

Ethnicity	Number of HS Graduates 2011	Percentage	Number of HS Graduates 2012	Percentage
Caucasian	5,979	55.90%	6,021	57.25%
African American	4,135	38.66%	3,885	36.94%
Asian American	366	3.42%	372	3.54%
Hispanic American	216	2.02%	239	2.27%
<b>TOTAL</b>	<b>10,696</b>	<b>100.00%</b>	<b>10,517</b>	<b>100.00%</b>

Source: Missouri Department of Elementary and Secondary Education



<sup>33</sup> The Missouri Department of Elementary and Secondary Education (DESE) is the administrative arm of the Missouri State Board of Education. DESE does not regulate, monitor or accredit private, parochial or home schools.

## 5. Post-Secondary Education Enrollment

Enrollment in post-secondary institutions is an entry to white collar employment, thus higher education potentially reduces the pool of workers likely to enter the construction industry. These data are presented for comparison only and provide limited inference due to limitations of the data. Students attending a Missouri post-secondary institution are considered temporary residents in the State; therefore, the number of Missouri residents that entered post-secondary institutions in the State cannot be inferred from the available dataset.<sup>34</sup>

Table 1.13 illustrates the numbers of individuals enrolled in post-secondary education by ethnicity in the City of St. Louis. These figures from the 2010 American Community Survey show that Caucasians (50.66 percent) and minorities (49.34 percent) have nearly equal representation in higher education in the City of St. Louis. Hispanic Americans are 3.48 percent of individuals enrolled in post-secondary education. Asian Americans were not reported due to the small number of respondents in the sample.

**Table 1.13: City of St. Louis Post-Secondary Program Enrollment**

Ethnicity	Enrolled in College	Percentage
Caucasian	10,874	50.66%
African American	9,846	45.87%
Asian American	*	*
Hispanic American	746	3.48%
<b>TOTAL</b>	<b>21,466</b>	<b>100%</b>

Source: US Census 2010 American Community Survey

\*Data may not be available because the number of sample cases is too small



<sup>34</sup> Missouri residency can generally be obtained by presence within Missouri for the primary purpose of full-time employment or retirement or for a minimum of twelve consecutive months along with proof of intent to make Missouri a permanent home for an indefinite period of time. "Student Residency Requirements," *Missouri Department of Higher Education*, November 21, 2012, <http://www.dhe.mo.gov/policies/student-residency.php>.

Table 1.14 illustrates the numbers of individuals enrolled in post-secondary education by ethnicity in St. Louis County. These figures from the 2010 American Community Survey show that in St. Louis County, Caucasians are more likely than minorities to pursue post-secondary education. Caucasians represent 65.73 percent of those enrolled in post-secondary education. African Americans are the largest minority group, representing 27.67 percent of individuals enrolled in post-secondary education. Asian Americans are 4.03 percent of individuals enrolled in post-secondary education. Hispanic Americans are the smallest minority group, representing 2.56 percent of individuals enrolled in post-secondary education.

**Table 1.14: St. Louis County Post-Secondary Program Enrollment**

Ethnicity	Enrolled in College	Percentage
Caucasian	36,008	65.73%
African American	15,160	27.67%
Asian American	2,207	4.03%
Hispanic American	1,405	2.56%
<b>TOTAL</b>	<b>54,780</b>	<b>100%</b>

Source: US Census 2010 American Community Survey

\*Data may not be available because the number of sample cases is too small

## **V. LOCAL HIRE EMPLOYMENT GOALS**

Local construction employment goals are a strategy to direct employment to residents within the jurisdiction or geographic area where a project is being undertaken. Local employment goals have been successful in stimulating the economy by supporting and promoting the hiring of local residents. As a policy, local employment goals can reduce the unemployment and underemployment rates. A local employment provision can reduce the local unemployment level by requiring contractors to hire workers who are not currently employed.

A local hire, is defined as a worker residing within a zip code in MSD's service area for at least thirty (30) days prior to the award of a MSD CIRP contract. The use of local hires would direct the employment opportunities to minority and female construction workers and apprentices who reside in the City of St. Louis and St. Louis County.

Table 1.15 presents a sample of hiring goals established for public works construction projects in various urban communities.



**Table 1.15: Local Employment Models**

Program Name	Agencies Involved	Enactment Date	Synopsis	Hiring Goals	Results
Maritime and Aviation Project Labor Agreement <sup>35</sup>	Port of Oakland, Local Unions	2000	Intended to cover the Capital Improvement Program (CIP). Program was designed to ensure project labor stability, the employment of local residents and utilization of small businesses.	Local Residents 50% Apprentices 20%	59.5 % or 2.1 million Project Work Hours performed by Local Residents
Alameda Corridor Project <sup>36</sup>	Alameda Corridor Transportation Authority, Center for Community Change	1998	To provide job training and placement services to 1,000 residents of the communities surrounding the project.	Local Residents 30% Apprentice Grads 30%	Pre-apprentice Program Graduates were 131% of the original goal
Local Employment Program <sup>37</sup>	Oakland Redevelopment Agency and City of Oakland	1993	The City of Oakland's local employment programs offer Oakland residents an opportunity to participate in the City's economic mainstream and gain experience in the construction trades.	Local Residents 50% New Hires 50% Apprentices 15%	N/A
Local Hiring in Publicly Assisted Contracts <sup>38</sup>	City of Hartford, Connecticut	1986	Hartford passed a first source hiring ordinance in 1986 that applies to publicly assisted projects of 40,000 sq. ft. or greater.	Local Residents 40% Minorities 25% Females 6.9% Apprentices 20% of workers and 50% must be Local Residents	N/A

<sup>35</sup> “Progress Report Summary,” Port of Oakland, *Maritime and Aviation Project Labor Agreement*, October 23, 2012, [http://www.portofoakland.com/pdf/busi\\_maplaReport\\_jan11July12.pdf](http://www.portofoakland.com/pdf/busi_maplaReport_jan11July12.pdf)

<sup>36</sup> “Replicating Success: The Alameda Corridor Job and Training Employment Program,” Community Center for Change, *Alameda Corridor Jobs Coalition*, October 23, 2012, <http://www.campusactivism.org/server-new/uploads/acjc%20replication%20manual.pdf>

<sup>37</sup> “Local Employment Program,” City of Oakland, California, October 23, 2012, <http://www2.oaklandnet.com/Government/o/CityAdministration/d/CP/s/LocalEmploymentApprenticeshipPrograms/index.htm>

<sup>38</sup> “Local Hiring Strategies: Case Studies,” Policy Link, October 23, 2012, [http://www.policylink.org/site/c.lkIXLbMNjRE/b.5137641/k.7ADF/Case\\_Studies.htm](http://www.policylink.org/site/c.lkIXLbMNjRE/b.5137641/k.7ADF/Case_Studies.htm)



Program Name	Agencies Involved	Enactment Date	Synopsis	Hiring Goals	Results
Local Employment Program <sup>39</sup>	City of Richmond, California	2006	To increase the number of employed persons living in the City of Richmond in an attempt to counteract the grave economic and social ills associated with the higher unemployment levels that exist within the City.	Local Residents 20% New Hires 20%	N/A
The New I-64 Utilization Plan <sup>40</sup>	Multiple	2006-2009	MoDOT was committed to increasing the minority, female and economically disadvantaged individuals working on the I-64 project and pledged up to \$2.5 million towards programs and incentives.	14.7% Minorities 6.9% Female 20% OJT Trainees	Minorities 19.3% Women 6.6% OJT Trainees 11.5%

<sup>39</sup> "Local Employment Program," City of Richmond, California, October 23, 2012, <http://www.ci.richmond.ca.us/DocumentView.aspx?DID=1374>

<sup>40</sup> "The New I-64 Utilization Plan Partnering Agreement," The New I-64, November 30, 2012, <http://www.thenewi64.org/download/2006-05-12%20Workforce%20Utilization%20Plan%20Partnering%20Agreement%20Signatures.pdf>.

## **VI. GOAL FORMULATION**

### **A. Formulation of the Construction Trades Employment Goal**

As set forth in the Order, the Civilian Labor Force is the minimum availability data needed to calculate construction employment goal. In calculating the goal, the sub-set of the Civilian Labor Force who self-reported construction as their occupation was analyzed. These data are a more narrowed accounting of the minority and female availability in the RRA. Arguably, this sub-set is employment ready. Because the ACS 2010 is an estimate, based on a sample of the population, there is reason to believe that it may underestimate the full availability of construction workers in the RRA. Given the longstanding socio-economic conditions that have hindered minority and female access to construction employment, it is reasonable to assume that there are construction workers within the Civilian Labor Force who did not report construction as their current occupation. These workers may have been discouraged or have been engaged in another occupation due to the shortage of construction employment opportunities at the time of reporting.

A two-step process was used to calculate the construction trades employment goal. In Step I, the baseline goal was calculated using the formula illustrated in Figure 1.02. The percentage of minority construction workers in the City of St. Louis was multiplied by the population of construction workers in the City of St. Louis. To this total was added the percentage of minority construction workers in St. Louis County multiplied by the population of construction workers in St. Louis County. This total was then divided by the combined City of St. Louis and St. Louis County construction worker population. The calculated base figure was 24.12 percent.

**Figure 1.02: Construction Trades Employment Goal Calculation**

$$\text{Baseline Goal} = \frac{\% \text{ Minorities (City)} \times \text{Population (City)} + \% \text{ Minorities (County)} \times \text{Population (County)}}{\text{Total Population (City)} + \text{Total Population (County)}}$$

In Step II, the base figure of 24.12 percent was adjusted using two assumptions. First, an adjustment of +3.7 percent was made because the American Community Survey queried individuals currently working in the construction industry and therefore did not capture construction workers deterred by the barriers to employment, nor did it capture those who, because of the downturn in the economy, recently changed their occupation. A second adjustment of +2.18 percent was made to account for growth in the St. Louis Region's construction jobs as well as the changing minority demographics of the City of St. Louis and St. Louis County that are not reflected in the 2010 American Community Survey. The two adjustments produced a final minority construction trades employment goal of 30 percent. The

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proposed goal reflects the minimum percentage of project work hours to be performed by minorities on CIRP construction projects.

The employment goal for females has been defaulted to the national standard of 6.9 percent and rounded to the nearest whole number, pursuant to 41 CFR Part 60-4.6. The proposed employment goal for females reflects the minimum percentage of project work hours to be performed by females (minority and non-minority) on CIRP construction projects. Minority and Female Construction Trades Goals are presented below:

**CONSTRUCTION TRADES EMPLOYMENT GOALS**

Minorities: 30 percent

Females: 7 percent

**B. Formulation of the Apprenticeship Employment Goal**

The formulation of the apprenticeship goal was based on the level of 2011-2012 public high school graduates in the City of St. Louis and St. Louis County relative to the percentage of minority and non-minority residents who list high school or its equivalency as their highest level of educational attainment.

Given the sponsored apprenticeship programs requirements and entry standards, the absence of minorities and females in registered apprenticeship programs cannot be attributed to a dearth of residents who meet the minimum requirements. The proposed apprenticeship goal is a combined minority and female number. The formula, as illustrated in Figure 1.03 was used to weight City, County, high school graduation and highest level of educational attainment datasets:

Percentage of minority and female 2011-2012 public high school graduates and highest level of educational attainment in the City of St. Louis was multiplied by the total minority and non-minority 2011-2012 public high school graduates and highest level of educational attainment in the City of St. Louis. Added to this total is the percentage of minority and female 2011-2012 public high school graduates and highest level of educational attainment in St. Louis County multiplied by the total minority and non-minority 2011-2012 public high school graduates and highest level of educational attainment in St. Louis County. This total was then divided by the combined City of St. Louis and County minority and non-minority 2011-2012 public high school graduates and highest level of educational attainment.

**Figure 1.03: Apprenticeship Employment Goal Calculation**

$$\text{Weighted Goal} = \frac{\% \text{ Minorities (City)} \times \text{Population (City)} + \% \text{ Minorities (County)} \times \text{Population (County)}}{\text{Total Population (City)} + \text{Total Population (County)}}$$



**OVERALL APPRENTICE EMPLOYMENT GOAL**  
Combined Minority and Female Goal: 40 percent

The apprentice employment goal was calculated at 39.7 percent, and rounded to the nearest whole number. The goal reflects the minimum project work hours as a percent of apprentice hours of to be performed by minorities and females on CIRP construction projects. The apprentice employment goal shall only apply to contractors who utilize apprentice labor.

**C. Formulation of the Local Employment Goal**

The proposed race and gender-neutral local employment goal reflects best practices of other agencies that have implemented programs to increase the employment of local residents. This goal also reflects MSD's socially responsible commitment to the City of St. Louis and County residents, by directing construction employment opportunities to local rate payers whose increased utility expenses fund the CIRP program in its entirety. This goal not only supports economic benefits for individuals, but provides economic development opportunities for local business enterprises, by ensuring that a percentage of CIRP dollars remain in the local economy.

Additionally, the race and gender-neutral local hire provision seeks to stimulate the employment of those without work or marginally employed. This practice facilitates the return of minority and non-minority unemployed and underemployed tradespersons and apprentices in sewer-related occupations. The proposed local hire employment goal is presented below:

**LOCAL EMPLOYMENT GOAL**  
Race and Gender-Neutral Goal: 30 percent



## **VII. RECOMMENDATIONS**

### **A. Introduction**

It is recommended that MSD institute a number of Best Management Practices to support and promote equity in hiring in order to foster long-term construction employment for local residents in MSD's service area. The following recommendations are offered to address the barriers to minority and female recruitment, training, retention and hiring in the local construction industry. They include strategies to track and report employment goal compliance.

The following recommendations incorporate suggestions made by members of the construction industry and advocates for inclusion in construction employment, specifically in the St. Louis Region.<sup>41</sup>

### **B. Programmatic Recommendations**

#### **1. Pre-Apprentice Program Services**

Collaboration with existing pre-apprentice programs or the formulation of an MSD-sponsored pre-apprentice program is recommended to provide recruitment and relevant job training for the target population. MSD's direct or indirect involvement in the pre-apprentice training would ensure a high degree of relevant training to prepare workers for employment on CIRP projects.

#### **2. Collaborative Approach**

Collaboration is a recommended strategy to achieve significant minority and female inclusion. Collaborating with existing pre-apprentice programs may be more cost effective than creating a new program. Existing programs in the City of St. Louis and St. Louis County (presented in the Appendix of this Report) enrolled nearly 2300 students between 2011 and 2012. These programs offer a range of training options as well as financial support and fringe benefits. By forging a mutually beneficial relationship with these existing programs coupled with employment goals for local minority and female residents, MSD stands to set a new benchmark for inclusion and equity. Additionally, leveraging resources already in place to support local, minority and female workers would reduce the doubling of efforts and maximizes the return on investment of public capital. Allowing pre-apprentice program sponsors to control their own delivery of services while incorporating the MSD-specialized employment requirements should work to benefit all interested parties. Supplemental services could be instituted as necessary to support MSD program objectives on a regular basis.



<sup>41</sup> "Construction Task Force Meeting Report: A Supplement to the St. Louis Construction Industry Study," *Public Policy Research Center University of Missouri – St. Louis*, 2012.

Collaborative efforts to deliver job-oriented technical assistance would be an effective tool in assuring that pre-apprentices are trained utilizing curriculum tailored to produce the skill sets required to effectively work on sewer rehabilitation projects. Additionally, such strategic partnerships can assist in preparing pre-apprentices to meet MSD employment requirements. Creating partnerships with pre-apprentice programs will allow prime contractors to effectively locate or be referred workers with the training specifically related to sewer projects.

### **3. Post-Employment Retention Strategies**

A reliable and trained workforce is essential for MSD to meet its policy objectives and the employment needs of the CIRP program. Job retention allows for construction workers to create a long-standing career in the industry and is more cost effective for employers than training new workers due to turnover. MSD should encourage its contractors to create and promote a worksite culture that supports inclusion and retention. To this end, it is recommended that MSD assign an MWBE Specialist the responsibility to oversee and monitor job site work conditions. An influx of female and minority workers will likely create tension and issues within the workplace. An MWBE Specialist could mitigate any ethnic, gender and age-related tensions in order to minimize workplace disputes and avoid complaints. These workplace issues can further be mitigated by creating institutional support to resolve conflict and internal dissension as they arise and foster an environment of respect.



### **C. Implementation Strategy**

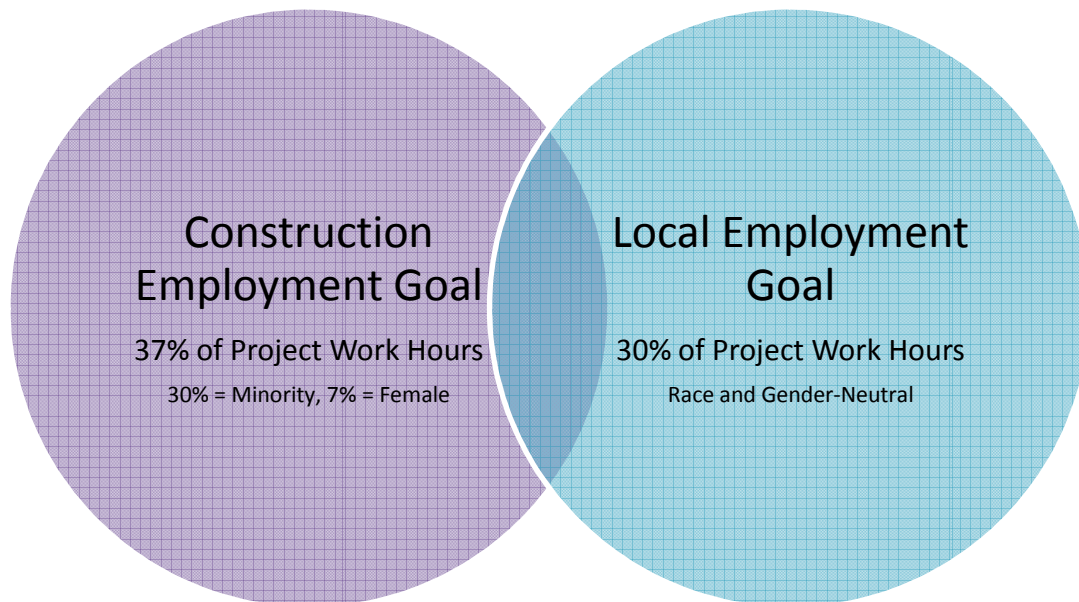
Construction trades and apprentice employment goals should be stipulated in all requests for bid. The goals stated in the contract standard provisions shall include all work performed by the prime contractor and any subcontractors.

As illustrated in Figure 1.04, employing local minority or female workers in the construction trades can count toward fulfilling the minority or female construction trades employment goal and the race and gender-neutral local employment goal, if applicable.

Employing a minority or non-minority apprentice will count toward fulfilling the apprentice employment goal and race and gender-neutral local employment goal, if applicable.

Hiring minority females in the construction trades may count towards fulfilling either the female construction trades employment goal or the minority construction trades employment goal, but not both.

**Figure 1.04: Goal Implementation Application**



## **D. Monitoring and Compliance Standards**

### **1. Submission of Workforce Data**

- a. Contractor's weekly certified payroll shall be used to verify minority, female, and local hires and to report compliance.
- b. The total number of minority and female construction workers employed on the contract shall be reflected in the contractor's weekly certified payroll.
- c. Local, minority and female work hours, as reflected on the contractor's weekly certified payroll, shall be calculated as a percentage of the total project work hours performed on the contract within each the category of tradesperson or an apprentice by the contractor. These hours shall equal or exceed the respective goals.
- d. Contractor's weekly certified payroll shall be used to verify minority, female, and local hires and to report compliance.
- e. Apprentice hours are only credited towards the established goals when apprentices are enrolled in a training program registered with the United States Department of Labor.
- f. MSD shall conduct regular and unscheduled site visits to confirm the presence of the workforce, as reported.

### **2. Monitoring, Penalties and Incentives**

- a. To ensure compliance with the program, the contractor shall provide payroll records upon request and permit the review of all pertinent records and documents.
- b. The contractor shall make such records available for inspection and audit within five (5) days of request. The contractor shall cooperate fully with any such inspection or audit and provide full access to all relevant materials.
- c. Contractors have a duty to accurately report information. A contractor who fails to supply accurate information shall be subject to sanctions. A contractor who intentionally supplies inaccurate information shall be subjected to additional sanctions and is subject to removal from MSDs pre-qualification list.





- d. Any Contractor who fails to carry out these requirements shall be in material breach of contract, which may result in the termination of prequalification status as MSD deems appropriate.
- e. Contractors not in compliance with the goals shall receive a notice of non-compliance and must submit a Corrective Action Plan within 15 days.
- f. The Corrective Action Plan must contain the efforts the contractor shall make in order to achieve the goals in a 30-day period.

### **3. Evaluation and Review**

- a. Every five (5) years from the effective date of this policy, MSD in conjunction with the Director of Diversity, shall evaluate the impact of the existing employment goals.
- b. The evaluation shall determine whether the availability of workers in the Civilian Work Force justifies modifying the goals.
- c. Upon completion of the review, a report setting forth findings, determinations and proposed amendments to participation levels for the trades and apprentice shall be furnished.
- d. If necessary, any changes and modifications to the employment goals will be made.

## ***E. Affirmative Action Steps***

Presented below are steps to address barriers to recruitment, training, retention and hiring of minority and female construction workers.

### **1. Recommendations for Increasing Minority and Female Recruitment and Hiring**

- a. An in-depth examination of the relevant sponsored apprenticeship program's recruitment and training standards shall be conducted to identify specific barriers to the selection and retention of minority and female workers by MSD's contractors.
- b. Information on MSD and its partners' recruitment efforts and commitment to diversity shall be disseminated in ethnic-based periodicals and community/faith-based organizations.



- c. Contractors shall be required to provide written notification to minority and female recruitment sources and community organizations describing the openings, screening procedures, and tests to be used in the apprentice selection process. These efforts shall be adequately documented and subject to MSD review.
- d. Contractors shall be required to focus recruitment efforts to minority, female and community organizations, schools with minority and female students and minority and female recruitment and training organizations.
- e. Pre-apprentice sources and registered apprentice programs shall be included in CIRP construction bid documents to facilitate the contractor's recruitment of minority, female and local hires.

**2. Recommendations for Increasing Minority and Female Training**

- a. Contractors who participate on CIRP contracts shall be required to make recruitment efforts known to the public and work with registered apprentice programs to publish recruitment and selection criteria.
- b. Contractors shall be required to participate in community-sponsored workshops and events to promote their construction industry and apprentice opportunities.

**3. Recommendations for Increasing Minority and Female Retention**

- a. Contractors shall document their efforts to ensure that seniority practices, job classifications, work assignments and other personnel practices do not have a discriminatory effect through continuous monitoring of all personnel and employment related activities to ensure obligations being carried out.
- b. Contractors shall seek assistance to meet their minority and female employment goals from community-based organizations, pre-apprentice programs and registered apprentice programs.



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# **CHAPTER 2: PROFESSIONAL SERVICES EMPLOYMENT GOALS**

## **I. LEGAL FRAMEWORK**

### **A. Legal Framework for Setting Professional Services Employment Goals for Contractors**

The standard for setting employment goals for non-construction supply and service (professional services) contracts is derived from equal employment opportunity (EEO) requirements of Executive Order (Order) 11246.<sup>1</sup> The United States Department of Labor Office of Federal Contract Compliance Program (OFCCP) is responsible for administration and enforcement of the Order. The methodology to set placement (employment) goals, in conjunction with enforcement and review standards has been set forth by OFCCP in the Code of Federal Regulations (CFR), 41 CFR Part 60-2.11.<sup>2</sup> As with the Construction and Apprentice Employment Goals, there is no mandate for MSD to use the federal standard for calculating employment goals because the CIRP is funded through user fees and a bond. However, the federal standard is an established tool for setting employment goals.

Under the federal regulations, the process to set employment goals for professional services contracts differs from the standards for setting goals for construction contracts. The minority and female construction employment goals were established by OFCCP. In contrast, the OFCCP does not set goals for professional services contractors. OFCCP instead requires professional services contractors to establish a goal based on the availability of minorities and females in their reasonable recruitment area (RRA). Federal regulations also require professional services contractors to produce an Affirmative Action Plan (AAP).



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<sup>1</sup> “Executive Order 11246, As Amended,” *U.S. Department of Labor, Office of Federal Contract Compliance Programs*, December 14, 2012, [http://www.dol.gov/ofccp/regs/statutes/eo11246.htm#.UMZq7-S\\_LXQ](http://www.dol.gov/ofccp/regs/statutes/eo11246.htm#.UMZq7-S_LXQ)

<sup>2</sup> “41 CFR Ch. 60,” *U.S. Department of Labor, Office of Federal Contract Compliance Programs*, December 14, 2012, <http://www.gpo.gov/fdsys/pkg/CFR-2006-title41-vol1/pdf/CFR-2006-title41-vol1-sec60-2-11.pdf>

The purpose of the AAP is to identify any job categories within the contractors employ that have an underutilization of available minorities or females.<sup>3</sup> As detailed in 41 CFR Part 60-2.11, the AAP must list employees within each of nine U.S. Equal Employment Opportunity Commission (EEOC) job categories by ethnicity and gender, job title and rank from the lowest paid to the highest paid. Within each job category, the percentage of minorities and females in each job category shall be compared to the availability of minorities and females in each job category within the contractor's reasonable recruitment area (RRA).

For any underutilized ethnic or gender group, numerical employment goals, based on minority and female availability, are formulated to achieve parity within each job category. A numerical goal is not a quota, nor does it permit the hiring or advancement of unqualified employees. Numerical goals provide a standard to measure the effectiveness of an AAP.<sup>4</sup> Good Faith Efforts to achieve the goals are set by the contractor but should minimally include activities to increase the pool of qualified candidates.<sup>5</sup>

## **II. METHODOLOGY**

### **A. Overview of Methodology for Availability Analysis**

In accordance with federal regulations, the workforce goals should reflect the minorities and females available in each respective job category within the RRA. Of the nine EEO-1 job categories, three have been determined to be relevant to services that are anticipated to characterize the workforce on MSD's professional services contracts.

For MSD's professional services contracts, the reasonable recruitment area has been defined as the City of St. Louis and St. Louis County. The Equal Employment Opportunity Tabulation (Tabulation) from the 2006-2010 U.S. Census American Community Survey is the source used to determine the availability of minorities and females in each job category within the RRA. The occupation and characteristic information, such as age, ethnicity, gender, industry and earnings were compiled from answers to the American Community Survey, a statistical survey administered by the United States Census Bureau, which annually samples three million Americans over the age of 15 who have worked in the past five years.

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<sup>3</sup> "Facts on Executive Order 11246 — Affirmative Action," *U.S. Department of Labor, Office of Federal Contract Compliance Programs*, December 14, 2012, [http://www.dol.gov/ofccp/regs/compliance/aa.htm#UL-dNOS\\_LXQ](http://www.dol.gov/ofccp/regs/compliance/aa.htm#UL-dNOS_LXQ)

<sup>4</sup> "Equal Employment Opportunity (EEO) Terminology," *U.S. National Archives and Records Administration*, December 11, 2012, <http://www.archives.gov/eo/terminology.html>

<sup>5</sup> "Basic EEO Requirements Under Executive Order 11246," *U.S. Department of Labor, Office of Federal Contract Compliance Programs*, December 14, 2012, <http://www.dol.gov/ofccp/regs/compliance/pdf/SBGuide.pdf>



The Tabulation is a custom product sponsored by a consortium of four Federal agencies: the Equal Employment Opportunity Commission (EEOC), the Employment Litigation Section of the Civil Rights Division at the Department of Justice (DOJ), the Office of Federal Contract Compliance Programs (OFCCP) at the Department of Labor (DOL), and the Office of Personnel Management (OPM), and developed in conjunction with the U.S. Census Bureau.<sup>6</sup>

The Tabulation is designed to measure the effects of and compliance with Equal Employment Opportunity (EEO) regulations. It serves as the primary external benchmark for comparing the race and gender composition of an employer’s internal workforce to the corresponding labor market. Data are presented by ethnicity and gender.

**B. Relevant EEO-1 Job Categories**

The relevant job categories were determined by reviewing positions classified within the nine EEO-1 Private Industry Job Categories: Officials and Managers, Professionals, Technicians, Sales Workers, Administrative Support, Craft Workers, Operatives, Laborers and Helpers, and Service Workers. Of the nine, three job categories were deemed relevant. Jobs within these three categories represent the staff most likely to be assigned to MSD CIRP professional services contracts—Officials and Administrators, Professionals, and Technicians. The availability analysis was performed for these three job categories. The professional services employment goal is based on these data and reflects a percentage of workers within these three job categories.

Table 2.01 presents the Equal Employment Opportunity Commission (EEOC) definition of private industry job categories, by major job activity, not company job titles. Each job category includes a definition and examples of the job types within each category. These job categories are based on the average skill level, knowledge, and responsibility involved in each occupation within the job category.<sup>7</sup>

**Table 2.01: EEOC Definitions of the Three Relevant EEO-1 Job Categories**

EEO-1 Job Category	Description of Job Categories
<i>Officials and Managers</i>	<p><i>Executive/Senior Level Officials and Managers</i></p> <p>Individuals who plan, direct and formulate policies, set strategy and provide the overall direction of enterprises/organizations for the development and delivery of products or services, within the parameters approved by boards of directors or other governing bodies. Residing in the highest levels of organizations, these executives plan, direct or coordinate activities with the support of subordinate executives and staff managers. They include, in larger organizations, those individuals within two reporting levels of the CEO, whose responsibilities require</p>

<sup>6</sup> “Equal Employment Opportunity (EEO) Tabulation,” *U.S. Census Bureau*, December 10, 2012, [http://factfinder2.census.gov/faces/nav/jsf/pages/wc\\_eeo.xhtml](http://factfinder2.census.gov/faces/nav/jsf/pages/wc_eeo.xhtml)

<sup>7</sup> “Standard Form 100, Rev. January 2006, Employer Information Report EEO-1,” *Equal Employment Opportunity Commission*, December 10, 2012, [http://www.eeoc.gov/employers/eeo1survey/upload/instructions\\_form.pdf](http://www.eeoc.gov/employers/eeo1survey/upload/instructions_form.pdf)



EEO-1 Job Category	Description of Job Categories
	<p>frequent interaction with the CEO. Examples of these kinds of managers are: chief executive officers, chief operating officers, chief financial officers, line of business heads, presidents or executive vice presidents of functional areas or operating groups, chief information officers, chief human resources officers, chief marketing officers, chief legal officers, management directors and managing partners.</p> <p><i>First/Mid Level Officials and Managers</i></p> <p>Individuals who serve as managers, other than those who serve as Executive/Senior Level Officials and Managers, including those who oversee and direct the delivery of products, services or functions at group, regional or divisional levels of organizations. These managers receive directions from the Executive/Senior Level management and typically lead major business units. They implement policies, programs and directives of executive/senior management through subordinate managers and within the parameters set by Executive/Senior Level management. Examples of these kinds of managers are: vice presidents and directors, group, regional or divisional controllers; treasurers; human resources, information systems, marketing, and operations managers.</p> <p>The First/Mid Level Officials and Managers subcategory also includes those who report directly to middle managers. These individuals serve at functional, line of business segment or branch levels and are responsible for directing and executing the day-to-day operational objectives of enterprises/organizations, conveying the directions of higher level officials and managers to subordinate personnel and, in some instances, directly supervising the activities of exempt and non-exempt personnel. Examples of these kinds of managers are: first-line managers; team managers; unit managers; operations and production managers; branch managers; administrative services managers; purchasing and transportation managers; storage and distribution managers; call center or customer service managers; technical support managers; and brand or product managers.</p>
<i>Professionals</i>	<p>Most jobs in this category require bachelor and graduate degrees, and/or professional certification. In some instances, comparable experience may establish a person's qualifications. Examples of these kinds of positions include: accountants and auditors; airplane pilots and flight engineers; architects; artists; chemists; computer programmers; designers; dieticians; editors; engineers; lawyers; librarians; mathematical scientists; natural scientists; registered nurses; physical scientists; physicians and surgeons; social scientists; teachers; and surveyors.</p>
<i>Technicians</i>	<p>Jobs in this category include activities that require applied scientific skills, usually obtained by post secondary education of varying lengths, depending on the particular occupation, recognizing that in some instances additional training, certification, or comparable experience is required. Examples of these types of positions include: drafters; emergency medical technicians; chemical technicians; and broadcast and sound engineering technicians.</p>



### **III. WORKFORCE AVAILABILITY ANALYSIS**

The availability analysis is the method to determine the number of qualified minority and female workers within each of the three identified job categories in the City of St. Louis and St. Louis County. The analysis was conducted utilizing data from the EEO Tabulation of the U.S. Census Bureau 2006-2010 American Community Survey.

The EEO Tabulation estimates the number of workers in each job category by residence and worksite. Data enumerating workers by residence were used to calculate the availability of minorities and females within the three identified job categories in the City of St. Louis and St. Louis County. MSD identified 56 professional job titles and six technical job titles which reflect the typical staff composition of engineering and non-engineering businesses. Table 2.02 depicts the selected job titles within each identified job category. Workers within these job titles were utilized to determine availability. Specific job titles were not available in the EEO Tabulation for the Officials and Managers job category; therefore, the availability estimates within this category represent the totality of positions.

The ethnic and gender availability percentages within each job category were calculated by dividing the number of workers in each ethnic and gender group by the total number of workers in all ethnic and gender groups.

**Table 2.02: Selected Job titles within Identified Job Categories**

<b>Professional and Technical Occupations</b>	
<b>Professionals</b>	
Wholesale and retail buyers, except farm products	Miscellaneous mathematical science occupations, including mathematicians and statisticians
Claims adjusters, appraisers, examiners, and investigators	Architects, except naval
Cost estimators	Surveyors, cartographers, and photogrammetrists
Human resources workers	Chemical engineers
Logisticians	Civil engineers
Management analysts	Computer hardware engineers
Meeting, convention, and event planners	Electrical and electronics engineers
Market research analysts and marketing specialists	Environmental engineers
Business operations specialists, all other	Industrial engineers, including health and safety
Accountants and auditors	Materials engineers
Appraisers and assessors of real estate	Mechanical engineers
Budget analysts	Editors



<b>Professional and Technical Occupations</b>	
Credit analysts	Public relations specialists
Financial analysts	Operations research analysts
Personal financial advisors	Biological scientists
Insurance underwriters	Conservation scientists and foresters
Financial examiners	Chemists and materials scientists
Credit counselors and loan officers	Environmental scientists and geoscientists
Tax examiners and collectors, and revenue agents	Physical scientists, all other
Tax preparers	Economists
Financial specialists, all other	Urban and regional planners
Computer and information research scientists	Construction and building inspectors
Computer programmers	Technical writers
Software developers, applications and systems software	Designers
Computer support specialists	Lawyers, and judges, magistrates, and other judicial workers
Database administrators	Librarians
Network and computer systems administrators	Other education, training, and library workers
Actuaries	
<b>Technicians</b>	
Biological technicians	Surveying and mapping technicians
Chemical technicians	Engineering technicians, except drafters
Geological and petroleum technicians, and nuclear technicians	Drafters





## **A. Officials and Managers**

Table 2.03 depicts the estimated number of Officials and Managers (as defined in Table 2.01) in the City of St. Louis by ethnicity and gender. These statistics from 2006-2010 American Community Survey data show that the gender composition of City of St. Louis Officials and Managers is comprised of 51.49 percent male and 48.51 percent female. These data also show that the ethnic composition of the City of St. Louis Officials and Managers is majority Caucasian. Caucasian males and females constitute 71.63 percent, African American males and females constitute 25.25 percent, Asian American males and females constitute 1.52 percent and Hispanic American males and females constitute 1.59 percent.

**Table 2.03: City of St. Louis Officials and Managers by Ethnicity and Gender**

<b>Ethnicity and Gender</b>	<b>Number</b>	<b>Percentage</b>
Caucasian Males	5,850	39.61%
Caucasian Females	4,730	32.02%
African American Males	1,505	10.19%
African American Females	2,225	15.06%
Asian American Males	115	0.78%
Asian American Females	110	0.74%
Hispanic American Males	135	0.91%
Hispanic American Females	100	0.68%
<b>Total</b>	<b>14,770</b>	<b>100.00%</b>

Source: U.S. Census Bureau, 2006-2010 American Community Survey

Table 2.04 depicts the estimated number of Officials and Managers (as defined in Table 2.01) in the St. Louis County by ethnicity and gender. These statistics from 2006-2010 American Community Survey data show that the gender composition of St. Louis County Officials and Managers is majority male comprised of 59.99 percent male and 40.01 percent female. These data also show that the ethnic composition of St. Louis County Officials and Managers is majority Caucasian. Caucasian males and females constitute 84.36 percent, African American males and females constitute 11.35 percent, Asian American males and females constitute 2.75 percent and Hispanic American males and females constitute 1.55 percent.

**Table 2.04: St. Louis County Officials and Managers by Ethnicity and Gender**

<b>Ethnicity and Gender</b>	<b>Number</b>	<b>Percentage</b>
Caucasian Males	37,970	52.45%
Caucasian Females	23,100	31.91%
African American Males	3,415	4.72%
African American Females	4,800	6.63%



Ethnicity and Gender	Number	Percentage
Asian American Males	1,425	1.97%
Asian American Females	565	0.78%
Hispanic American Males	620	0.86%
Hispanic American Females	500	0.69%
<b>Total</b>	<b>72,395</b>	<b>100.00%</b>

Source: U.S. Census Bureau, 2006-2010 American Community Survey

## **B. Professionals**

Table 2.05 depicts the estimated number of workers in the selected professional job titles (as presented in Table 2.02) who are City of St. Louis residents by ethnicity and gender. These statistics from 2006-2010 American Community Survey data show that the gender composition of City of St. Louis Professionals is majority male comprised of 56.64 percent male and 43.36 percent female. These data also show that the ethnic composition of the City of St. Louis Professionals is majority Caucasian. Caucasian males and females constitute 73.52 percent, African American males and females constitute 19.06 percent, Asian American males and females constitute 5.41 percent and Hispanic American males and females constitute 2 percent.

**Table 2.05: City of St. Louis Selected Professionals by Ethnicity and Gender**

Ethnicity and Gender	Number	Percentage
Caucasian Males	6,335	44.25%
Caucasian Females	4,190	29.27%
African American Males	999	6.98%
African American Females	1,730	12.08%
Asian American Males	560	3.91%
Asian American Females	215	1.50%
Hispanic American Males	214	1.49%
Hispanic American Females	73	0.51%
<b>Total</b>	<b>14,316</b>	<b>100.00%</b>

Source: U.S. Census Bureau, 2006-2010 American Community Survey

Table 2.06 depicts the estimated number of workers in the selected professional job titles (as presented in Table 2.02) who are St. Louis County residents by ethnicity and gender. These statistics from 2006-2010 American Community Survey data show that the gender composition of St. Louis County Professionals is majority male comprised of 58.03 percent male and 41.97 percent female. These data also show that the ethnic composition of St. Louis County Professionals is majority Caucasian. Caucasian males and females constitute 81.81 percent, African American males and females constitute 9.99 percent, Asian American males and females constitute 6.44 percent and Hispanic American males and females constitute 1.76 percent.



**Table 2.06: St. Louis County Selected Professionals by Ethnicity and Gender**

Ethnicity and Gender	Number	Percentage
Caucasian Males	28,509	48.27%
Caucasian Females	19,810	33.54%
African American Males	2,423	4.10%
African American Females	3,479	5.89%
Asian American Males	2,754	4.66%
Asian American Females	1,049	1.78%
Hispanic American Males	590	1.00%
Hispanic American Females	448	0.76%
<b>Total</b>	<b>59,062</b>	<b>100.00%</b>

Source: U.S. Census Bureau, 2006-2010 American Community Survey

**C. Technicians**

Table 2.07 depicts the estimated number of workers in the selected technical job titles (as presented in Table 2.02) who are City of St. Louis residents by ethnicity and gender. These statistics from 2006-2010 American Community Survey data show that the gender composition of the City of St. Louis Technicians is majority male comprised of 76.23 percent male and 23.77 percent female. These data also show that the ethnic composition of the City of St. Louis Technicians is majority Caucasian. Caucasian males and females constitutes 52.63 percent, African American males and females constitute 33.96 percent, Asian American males and females constitute 8.49 percent and Hispanic American males and females constitute 4.92 percent.

**Table 2.07: City of St. Louis Selected Technicians by Ethnicity and Gender**

Ethnicity and Gender	Number	Percentage
Caucasian Males	240	40.75%
Caucasian Females	70	11.88%
African American Males	155	26.32%
African American Females	45	7.64%
Asian American Males	25	4.24%
Asian American Females	25	4.24%
Hispanic American Males	29	4.92%
Hispanic American Females	0	0.00%
<b>Total</b>	<b>589</b>	<b>100.00%</b>

Source: U.S. Census Bureau, 2006-2010 American Community Survey



Table 2.08 depicts the estimated number of workers in the selected technical job titles (as presented in Table 2.02) who are St. Louis County residents by ethnicity and gender. These statistics from 2006-2010 American Community Survey data show that the gender composition of St. Louis County Technicians is majority male comprised of 76.55 percent male and 23.45 percent female. These data also show that the ethnic composition of St. Louis County Technicians is majority Caucasian. Caucasian males and females constitute 76.5 percent, African American males and females constitute 20.31 percent, Asian American males and females constitute 1.47 percent and Hispanic American males and females constitute 1.72 percent.

**Table 2.08: St. Louis County Selected Technicians by Ethnicity and Gender**

Ethnicity and Gender	Number	Percentage
Caucasian Males	1,250	61.33%
Caucasian Females	309	15.16%
African American Males	270	13.25%
African American Females	144	7.07%
Asian American Males	20	0.98%
Asian American Females	10	0.49%
Hispanic American Males	20	0.98%
Hispanic American Females	15	0.74%
<b>Total</b>	<b>2,038</b>	<b>100.00%</b>

Source: U.S. Census Bureau, 2006-2010 American Community Survey



**IV. GOAL FORMULATION**

**A. Formulation of Professional Services Employment Goal**

As shown in Figure 2.01, the minority availability was determined by combining the total number of minority male and female workers in the selected job titles in the City of St. Louis and St. Louis County. This total was then divided by the total number of minority and non-minority workers in the selected job titles in the City of St. Louis and St. Louis County. This calculation was performed for each job category.

**Figure 2.01: Minority Availability Calculation**

$$\text{Minority Availability} = \frac{\text{Minority Males and Females (City)} + \text{Minority Males and Females (County)}}{\text{Total Minorities and Non – Minorities (City)} + \text{Total Minorities and Non – Minorities (County)}}$$

As shown in Figure 2.02, the non-minority female availability was determined by combining the total number of non-minority female workers in the selected job titles in the City of St. Louis and St. Louis County. This total was then divided by the total number of minority and non-minority workers in the selected job titles in the City of St. Louis and St. Louis County. This calculation was performed for each job category.

**Figure 2.02: Non-Minority Female Availability Calculation**

$$\text{Non – Minority Female Availability} = \frac{\text{Non – Minority Females (City)} + \text{Non – Minority Females (County)}}{\text{Total Minorities and Non – Minorities (City)} + \text{Total Minorities and Non – Minorities (County)}}$$

Table 2.09 presents the percentage of available minority workers and non-minority female workers by job category.

**Table 2.09: City of St. Louis and St. Louis County Final Availability**

Job Category	Minority Availability	Non-Minority Female Availability
Officials and Managers	17.80%	31.93%
Professionals	18.48%	33.33%
Technicians	28.85%	14.43%



The minority male and female and non-minority female availability within each job category was combined to represent the professional services workforce employment goals. The overall minority goal was calculated by dividing the total number of minority male and female workers in each category by all workers. The overall non-minority female goal was calculated by dividing the total number of non-minority females in each category by all workers. The denominator for each calculation is 149,443. To achieve the employment goals, the contractor’s workforce should equal or exceed the presented goals.

**Figure 2.03: Overall Employment Goals Calculation**

***Minority Employment Goal =***

$$\frac{\begin{aligned} & \text{Total Minority Male and Females in Each Job Category (City)} \\ & + \text{Total Minority Males and Females in Each Job Category (County)} \end{aligned}}{\begin{aligned} & \text{Total Minorities and Non – Minorities in Each Job Category(City)} \\ & + \text{Total Minorities and Non – Minorities in Each Job Category(County)} \end{aligned}}$$

***Non – Minority Female Employment Goal =***

$$\frac{\begin{aligned} & \text{Total Non – Minority Females in Each Job Category (City)} \\ & + \text{Total Non – Minority Female in Each Job Category (County)} \end{aligned}}{\begin{aligned} & \text{Total Minorities and Non – Minorities in Each Job Category (City)} \\ & + \text{Total Minorities and Non – Minorities in Each Job Category(County)} \end{aligned}}$$

**PROFESSIONAL SERVICES EMPLOYMENT GOALS**

Minorities: 18 percent  
Females: 32 percent

**V. RECOMMENDATIONS**

**A. Introduction**

The purpose for setting professional services employment goals is to ensure that the demographic composition of MSD’s professional services contractors’ workforce is in parity with the availability of minorities and females within the City of St. Louis and St. Louis County. The following strategies are recommended to support and promote equity in hiring on CIRP-related contracts in order to foster long-term employment for minority and female local residents in MSD’s service area.



## **B. Goal Implementation Strategy**

The professional services employment goals should be stipulated in all requests for proposals and statements of qualifications. The goal applies to the contractor's incumbent workforce in each of the three job categories. Documentation of the contractor's incumbent workforce in each relevant category should be presented in the contractor's Affirmation Action Plan and submitted as a condition for responsiveness. Contents of the Affirmative Action Plan are detailed in 41 CFR Part 60-2.<sup>8</sup>

In contrast to construction contractors workforce which is dependent on the job or contract, professional services contractors generally have a fully staffed permanent workforce. Professional services contractors' workforce composition, in terms of skill set, education level and experience are basic evaluation criteria set forth in a solicitation. It is unlikely that a professional services contractor will have shortages within their workforce, as it will effectively make them less competitive in the bidding process. Therefore, professional services goals and their implementation strategies apply to the pre-existing incumbent workforce of the contractor. This policy includes the entire professional workforce of the contractor and not just the team whose qualifications are presented in solicitation materials.

The minimum affirmative action steps required of professional services contractors whose incumbent workforce does not meet the employment goals within each job category prior to the award of a contract, include utilizing subconsultants whose workforce composition will assist with achieving parity and making a commitment to conduct focused recruitment to fill any new positions resulting from MSD's CIRP contracts.

### **1. Bid Evaluation**

Evaluation points shall be awarded based on the level of minority and female utilization prior to the award of a contract. Contractors may earn up to 10 percent of the total evaluation points for the ethnic and gender composition of their incumbent workforce. Evaluation points will be awarded based on the following guidelines:

- Contractors whose incumbent workforce is at parity with the employment goals will be awarded the maximum ten (10) percent of the total evaluation points.
- Contractors whose incumbent workforce is within 50 percent of the employment goals will be awarded five (5) percent of the total evaluation points.
- Contractors whose incumbent workforce is below 50 percent of the employment goals in each category will receive no additional evaluation points, unless the following conditions are met.

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<sup>8</sup> "Electronic Code of Federal Regulations Part 60-2—Affirmative Action Programs," *U.S. Government and Printing Office*, December 14, 2012, <http://www.ecfr.gov/cgi-bin/text-idn?c=ecfr&sid=db346ebc6cb24c20b2b0254a65d4d651&rgn=div5&view=text&node=41:1.2.3.1.2&idno=41>



Contractors whose incumbent workforce is below parity may utilize the ethnic and gender composition of their subcontractor's workforce toward achieving the goal and receive the corresponding evaluation points based on the following guidelines:

- Subcontractors must have a workforce of two or more in order for their ethnic and gender composition to be considered for goal attainment.
- Subcontractors whose workforce is to be considered for goal attainment must also submit a form detailing their ethnic and gender makeup as a condition of responsiveness.
- The total amount of subcontracting dollars must be at least 25% of the total contract dollar amount.
- Subcontractor's ownership may be of any race or gender. Only the race and gender of the subcontractor's workforce, as reported, will be considered for goal attainment and the allotment of evaluation points.

#### **Figure 2.04: Evaluation Point Allotment Application**

For Example:

**Contractor A:** total incumbent workforce is 25% minority, which exceeds parity with the minority employment goal and 20% female, which at least 50% of the female employment goal. Therefore, **Contractor A** receives five (5) evaluation points.

- **Sub Contractor A:** total incumbent workforce is 20% female and has been assigned 15% of the total contract dollars.
- **Sub Contractor B:** total incumbent workforce is 50% female and has been assigned 10% of the total contract dollars.

Because the total subcontracting dollars are 25% of the total contract dollar amount, **Contractor A**, may utilize the subcontractors' workforce to meet the goal. To calculate utilization, **Contractor A** would add the *total number of females in both subcontractors workforce* divided by the *total number of workers in both subcontractors' workforce*. The resulting percentage represents female utilization.





## **C. Programmatic Recommendations**

### **First Source Hiring Program**

A First Source Hiring Program is a referral system, designed to link City of St. Louis and St. Louis County residents with the resulting employment opportunities provided by the CIRP. This can be accomplished through the joint efforts of MSD, job training agencies, community-based organizations and contractors. This program provides economic benefits to the local community by providing early access to targeted applicants for available CIRP employment opportunities. In addition, contractors receive referrals of qualified targeted applicants for consideration. Targeted applicants include low income, unemployed or underemployed individuals residing within MSD's service area.

## **D. Monitoring and Compliance Standards**

### **1. Job Opportunity Notification**

- a. Prior to hiring for any CIRP-related job, contractors shall notify the First Source Referral System and list the job opportunity. The notification should include a job description with qualifications, salary range and any additional requirements.

### **2. Referrals**

- a. For a ten-day period, contractors shall only consider and interview applicants referred by the First Source Referral System, and should make a good faith effort to hire these applicants.
- b. Neither contractor nor applicant shall be required to pay any fee associated with the First Source Hiring Program or Referral System.

### **3. Hiring**

- a. When hiring, contractors shall only consider targeted applicants for a ten (10) day period. After this period, contractors who have made a good faith effort to hire targeted applicants may consider applicants from any source.
- b. Contractors shall use regular hiring practices, such as interviews and assessment exercises, to consider all applicants, including applicants referred through the First Source Referral System.



#### **4. Submission of Workforce Data**

- a.** On a quarterly basis, contractors shall submit the total number of employees hired and the total number of targeted applicants hired by job classification, ethnicity and gender.
- b.** Contractors shall retain sufficient records for MSD to monitor compliance. This includes job notifications sent to the Referral System and referrals from the Referral System, applications received from any referral source, the number of targeted applicants hired, and total number of employees hired for any CIRP-related job.
- c.** The contractor shall make such records available for inspection and audit within five (5) days of request. The contractor shall cooperate fully with any such inspection or audit and provide full access to all relevant materials.

#### **5. Monitoring and Penalties**

- a.** Contractors have a duty to accurately report information. A contractor who fails to supply accurate information shall be subject to sanctions. A contractor who intentionally supplies inaccurate information shall be subjected to additional sanctions and is subject to removal from MSD's pre-qualification list.
- b.** Any Contractor who fails to carry out these requirements shall be in material breach of contract, which may result in the termination of prequalification status, as MSD deems appropriate.

Contractors not in compliance with the goals shall receive a notice of non-compliance and must submit a Corrective Action Plan within 15 days



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# **APPENDICES**

- A. City of St. Louis Pre-Apprentice Programs
- B. St. Louis County Pre-Apprentice Programs
- C. City of St. Louis Registered Apprentice Programs
- D. St. Louis County Registered Apprentice Programs

## A. City of St. Louis Pre-Apprentice Programs

Program Name	Contact Information	Program Sponsor	Admissions Criteria	Length	Career Options	Program Funding Source	Fringe Benefits	Students in 2011	Students in 2012
Association of Construction Careers, Education and Support Services (ACCESS)	ACCESS Center 700 Rosedale, Suite 1611 Saint Louis, MO 63112 Phone: (314) 863-8889 Fax: (314) 862-7720 info@access-construction-metrostl.com www.access-construction-metrostl.com	AGC St. Louis	None, ACCESS is a database management and referral service	N/A	Job placement, tracking and referral for all construction trades.	AGC St. Louis, Construction Consumers	<ul style="list-style-type: none"> <li>Orientation, information and training schedules</li> </ul>	--	--
Construction Careers Center	Construction Careers Center 1224 Grattan Street St. Louis, Missouri 63104 Phone: 314-588-9991 www.constructioncareerscenter.org	St. Louis Public Schools & AGC of St. Louis	Open to all interested St. Louis City students	48 Months	15 construction trade program	State of Missouri and private donors.	<ul style="list-style-type: none"> <li>Individual tutoring</li> <li>Summer internships</li> <li>Mentoring</li> <li>Job placements</li> <li>Driver's education</li> </ul>	321	--
St. Louis Agency on Training and Employment (SLATE)	SLATE 1520 Market Street, 3rd Floor St. Louis, MO 63103 Phone: 314- 589-8000 Fax: 314-231-7923	City of St. Louis	None	Varies	Serves as a career placement central for all career options	City of St. Louis, DOL, and Missouri Department of Labor.	<ul style="list-style-type: none"> <li>Financial Incentives</li> <li>Career Development</li> <li>Counseling</li> <li>Transportation Assistance</li> </ul>	--	--
St. Louis Job Corps	St. Louis Job Corps Center 4333 Goodfellow Boulevard St. Louis, MO 63120 Phone: 314- 679-6200 Fax: 314-383-5717	DOL	Ages 16 - 24. High school diploma or willingness to obtain GED, citizen or legal resident and low-income eligibility	Varies	Construction, Finance & Business, Homeland Security, others	DOL	<ul style="list-style-type: none"> <li>High school diploma or GED</li> <li>College credits;</li> <li>Housing and meals</li> <li>Basic health care</li> <li>Post training transitional assistance</li> <li>\$1,200 transition allowance</li> </ul>	450	475
								<b>Total Students 2011</b>	<b>Total Students 2012</b>

Program Name	Contact Information	Program Sponsor	Admissions Criteria	Length	Career Options	Program Funding Source	Fringe Benefits	Students in 2011	Students in 2012
<b>TOTAL</b>								<b>771</b>	<b>475</b>

(--) Denotes that the requested information was not provided

## B. St. Louis County Pre-Apprentice Programs

Program Name	Contact Information	Program Sponsor	Admissions Criteria	Program Length	Career Training Options	Program Funding Source	Other Fringe Benefits	Students in 2011	Students in 2012
Construction Prep Center	Construction Prep Center 6347 Plymouth Avenue St. Louis, MO 63133 Phone: 314-746-0700 vmartain@metcenterstl.com	MOKAN-CCAC AGC St. Louis MODOT City of St. Louis	City of St. Louis and County residents with High School Diploma or GED	3 Months	Provides 440 Hours of the fundamentals and advanced curricula construction pre-apprenticeship training	MoDOT FHWA Federal, State & Local Grants	<ul style="list-style-type: none"> <li>• Drug Awareness Counseling</li> <li>• Tool/Clothing Allowance</li> <li>• Housing</li> <li>• Family/Financial Wellness</li> <li>• Placement Services</li> <li>• Monitoring and Mentoring</li> </ul>	120	72
I-64 Design/Build Community Workforce Agreement	MO Dept. of Transportation 1590 Woodlake Drive, Chesterfield, MO 63017 Phone: 314-275-1500 Fax: 314- 340-4119	Various	City of St. Louis and County residents with High School Diploma or GED	Project lasted from 2006 to 2009	Program recruited 657 participants for heavy construction, graduated 430 and placed 147 in construction and non-construction jobs	MoDOT	<ul style="list-style-type: none"> <li>• Drug Awareness Counseling</li> <li>• Tool/Clothing Allowance</li> <li>• Housing</li> <li>• Family/Financial Wellness</li> <li>• Placement Services</li> <li>• Monitoring and Mentoring</li> </ul>	N/A	N/A
North County Technical High School	Special School District Career & Technical Education 12110 Clayton Road Creve Coeur, MO 63131 Phone: 314-989-8242 Fax: 314-989-8325 <a href="http://www.ssdmo.org">www.ssdmo.org</a>	Public High School sponsored by the Special School District of St. Louis County, MO	Public High School. Grades 9 - 12 Open to all interested City of St. Louis students.	48 Months	Provides career training options in 30 fields including construction related fields. Provides graduates with advanced placement options in 12 construction apprenticeship training programs	State of Missouri	<ul style="list-style-type: none"> <li>• Core High School Curriculum</li> <li>• Technology based learning</li> <li>• Hands-on training</li> <li>• Access to apprenticeship programs</li> <li>• Internships, job placements</li> </ul>	447	N/A
South County Technical High School	Special School District Career & Technical Education 12110 Clayton Road Creve Coeur, MO 63131 Phone: 314-989-8242 Fax: 314-989-8325 <a href="http://www.ssdmo.org">www.ssdmo.org</a>	Public High School sponsored by the Special School District of St. Louis County, MO	Public High School. Grades 9 - 12 Open to all interested City of St. Louis students.	48 Months	Provides career training options in 30 fields including construction related fields. Provides graduates with advanced placement options in 12 construction apprenticeship training programs	State of Missouri	<ul style="list-style-type: none"> <li>• Core High School Curriculum</li> <li>• Technology based learning</li> <li>• Hands-on training</li> <li>• Access to apprenticeship programs</li> <li>• Internships, job placements</li> </ul>	345	--
MOWIT (Missouri Women in	MOWIT P. O. Box 435045 St. Louis, Missouri 63143	Various	Women and individuals committed to	N/A Facilitates	This organization continues to play a major role as an advocate responsible for	Grants, donations, and fundraising	• Advocates for women-friendly work environments	N/A	N/A

Program Name	Contact Information	Program Sponsor	Admissions Criteria	Program Length	Career Training Options	Program Funding Source	Other Fringe Benefits	Students in 2011	Students in 2012
Trades)	Phone: 314-963-3200 Fax: 314-963-3284 info@MOWIT.org		improving access for women in construction trades	recruitment and placement of women in construction trades	increasing the number of women in construction trades and technical careers		<ul style="list-style-type: none"> <li>• Mentoring and support</li> <li>• Conducts trade fairs focusing of women in trades</li> </ul>		
Youth Build	St Louis Youth Build 93 North Oaks St. Louis MO 64121 Phone: 314-261-0202 Fax: 314-261-0208 <a href="http://www.stl-youthbuild.org">www.stl-youthbuild.org</a>	Carpenter's Joint Apprentice Training Fund of St. Louis	Non-traditional students aged 18 to 24.	6 Months to 1 Year	High school graduation, GED Certification, OSHA 10 Training, construction trades	U. S. Department of Labor	<ul style="list-style-type: none"> <li>• GED Training</li> <li>• Entry into the Carpenters Apprenticeship Program</li> <li>• Job Placement</li> <li>• Counseling Services</li> </ul>	33	33
								<b>Total Students 2011</b>	<b>Total Students 2012</b>
<b>TOTAL</b>								<b>945</b>	<b>105</b>

(--) Denotes that the requested information was not provided.

(N/A) Denotes that the field is non-applicable.

### **C. City of St. Louis Registered Apprentice Programs**

Construction Trade	Registered Program and Contact Information	Program Sponsor	Admission Criteria	Program Length	Students Entered in 2011	Students Entered in 2012	Students Graduated in 2011	Students Graduated in 2012	Grads Placed in 2011	Grads Placed in 2012
Construction Laborers (Laborers Locals have no Registered Programs in the City of St. Louis. The program is located at High Hills, Missouri.)	Construction Craft Laborer's Apprenticeship Program 35 Opportunity Road High Hill, MO 63350 Phone: 636-585-1500 Fax: 636-585-2604 Email: apprentice@laborers-Highhill.org	Construction Craft Laborer's Apprenticeship Program	Minimum age: 18. High School diploma, transcript or GED required.	4000 hours On-the-Job Training 288-368 hours of Off-Site Training	93	48	44	--	--	--
Electricians	IBEW / NECA Joint Apprenticeship Program 2300 Hampton Avenue St. Louis, Missouri 63139 Phone: 314-644-3587 Fax: 314-644-3589 Email: dgralike@stlejatc.org	IBEW / NECA Joint Apprenticeship Program	Minimum age: 18 Application Fee: \$25 which can be waived for hardship	8,000 hours of Training	49	57	33	30	38	45
	NECA / IBEW Local 350 3245 Hampton Avenue St. Louis, Missouri 63139  (The sponsor of this Program is based in the City of St. Louis but the training program is not. It is based in Hannibal, Missouri.)	NECA / IBEW Local 350	--	--	--	--	--	--	--	--
Operating Engineers/Equipment Operators	Operating Engineers Local 148 & Signatory Contractors 2929 South Jefferson St. Louis, Missouri 63118	Operating Engineers Local 148 & Signatory Contractors	Minimum age: 18 Applications accepted Monday through Friday, 8:00 a.m. to 3:00 p.m.	2 Years	--	--	--	--	--	--
Structural Steel/Iron Workers	St. Louis Ironworkers JATP 6301 Knox Industrial Drive, St. Louis, Missouri 63139 Jim Hunt, Coordinator Phone: 314-644-1550 Fax: 644-1536	St. Louis Ironworkers Joint Apprenticeship Training Program	Minimum age: 18 Applications accepted Monday through Friday, 7:30 a.m. to 3:00 p.m.	4 Years	33	0	85	86	--	--



Construction Trade	Registered Program and Contact Information	Program Sponsor	Admission Criteria	Program Length	Students Entered in 2011	Students Entered in 2012	Students Graduated in 2011	Students Graduated in 2012	Grads Placed in 2011	Grads Placed in 2012
Cement Masons	St. Louis Cement Mason Joint Apprenticeship Program 6301 Knox Industrial Drive, St. Louis, Missouri 63139 Phone: 314-644-1550 Fax: 314-644-1536	St. Louis Cement Mason Joint Apprenticeship Program Cement Masons, Local 527	Minimum age: 18 Applications accepted Monday through Friday, 7:30 a.m. to 3:00 p.m.	3 Years	23	17	4	3	--	--
Painters	No Registered Program in the City of St. Louis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pipefitters	No Registered Program in the City of St. Louis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Plumbers	No Registered Program in the City of St. Louis	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
					<b>Students Entered in 2011</b>	<b>Students Entered in 2012</b>	<b>Students Graduated 2011</b>	<b>Students Graduated 2012</b>	<b>Grads Placed 2011</b>	<b>Grads Placed 2012</b>
<b>TOTAL</b>					<b>198</b>	<b>122</b>	<b>166</b>	<b>119</b>	<b>38</b>	<b>45</b>

(--) Denotes that the requested information was not provided.

(N/A) Denotes that the field is non-applicable.

**D. St. Louis County Registered Apprentice Programs**

Construction Trade	Registered Program and Contact Information	Program Sponsor	Admission Criteria	Program Length in Years	Students Entered in 2011	Students Entered in 2012	Students Graduated in 2011	Students Graduated in 2012	Grads Placed in 2011	Grads Placed in 2012
Carpenters	St. Louis Carpenters JAP 8300 Valcour Avenue St. Louis, MO 63123 Tony Caputa Phone: 314-457-8300 Fax: 314-457-8305	St. Louis Carpenters JAP	Minimum age: 18. High School diploma, transcript or GED required.	Open ended; Advance based on competency	681	581	130	64	--	--
Operating/Equipment Engineers  (Local 513 has no Registered Program in St. Louis County. The program is located in Silex, Missouri)	Operating Engineers Training Program 75 Highway F, Silex, Missouri, 63377 Phone: 573-485-2200 Fax: 573-485-2240 info@oelocal513training.com	Operating Engineers Training Program	Minimum age: 18. High School diploma, transcript or GED required. Applications accepted daily from 8:00 a.m. to 3:00 p.m.	3 Years	0	29	0	53	0	39
Pipefitters	Plumbers/Pipefitters Local 562 1084 Kenran Industrial Drive St. Louis, Missouri 63137 Phone: 314-388-0722 Fax: 314-388-5820	Plumbers/Pipefitters Local 562	Minimum age: 18. High School diploma, transcript or GED required. Applications accepted daily from 8:00 a.m. to 3:00 p.m.	5 Years	237*	70*	178*	52*	70*	52*
Plumbers	Plumbers/Pipefitters Local 562 1084 Kenran Industrial Drive St. Louis, Missouri 63137 Phone: 314-388-0722 Fax: 314-388-5820	Plumbers/Pipefitters Local 562	Minimum age: 18. High School diploma, transcript or GED required. Applications accepted daily from 8:00 a.m. to 3:00 p.m.	5 Years						
Painters	Eastern Missouri Painters, Decorators and Wall Paper Hangers JAP 18036 Eads Avenue, Chesterfield, MO 63005 Phone: 636-733-2325 Fax: 636-733-2338	Eastern Missouri Painters, Decorators and Wall Paper Hangers JAP	Minimum age: 18. High School diploma, transcript or GED required. Applications accepted only on Fridays from 9:00 a.m. to Noon.	3 Years	55	39	39	23	--	--
Electricians	Associated Electrical Contractors Local 57 JAP 8300 Valcour Avenue, St. Louis MO 63123	Multiple	Minimum age: 18. High School diploma, transcript or GED required.	4-5 Years	78	73	1	3	1	3

Construction Trade	Registered Program and Contact Information	Program Sponsor	Admission Criteria	Program Length in Years	Students Entered in 2011	Students Entered in 2012	Students Graduated in 2011	Students Graduated in 2012	Grads Placed in 2011	Grads Placed in 2012
	Independent Electrical Contractors 12704 Pennridge Drive Bridgeton, MO 63044	Independent Electrical Contractors - St. Louis	Minimum age: 18. High School diploma, transcript or GED required.	4-5 Years	125	125	9	--	125	125
	Ameren Missouri Power Operations 11149 Lindbergh Business Center St. Louis, MO 63123	Ameren Missouri Power	Minimum age: 18. High School diploma, transcript or GED required.	4-5 Years	--	--	--	--	--	--
Structural Steel/Iron Workers	No Registered Program in the St. Louis County	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Construction Laborers	No Registered Program in the St. Louis County	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Operating Engineers/Equipment Operators	No Registered Program in the St. Louis County	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cement Masons	No Registered Program in the St. Louis County	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
					<b>Students Entered in 2011</b>	<b>Students Entered in 2012</b>	<b>Students Graduated 2011</b>	<b>Students Graduated 2012</b>	<b>Grads Placed 2011</b>	<b>Grads Placed 2012</b>
<b>TOTAL</b>					<b>1176</b>	<b>917</b>	<b>357</b>	<b>195</b>	<b>196</b>	<b>219</b>

(--) Denotes that the requested information was not provided.

(N/A) Denotes that the field is non-applicable.

(\*) Plumber and Pipefitter data were not available separately; therefore these data include both trades.



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