

REIMAGINING RAMSEY COUNTY

Building a Resilient Workforce

RealTime Talent

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Reimagining Ramsey County

Introduction

In the first three months of the economic impact of COVID-19, 80,036 Ramsey County residents applied for unemployment insurance—about 22.8% of the local employed workforce and representing over 10% of all unemployment insurance applications statewide. Although the employment impacts of the pandemic have been forecast to be sharp and short by most economists, without intentional reimagining of our communities, recovery is unlikely to be equally positive for all residents.

This report aims to highlight disparate workforce impacts of the COVID-19 pandemic and the racial and ethnic disparities that have persisted in our community. This report—part of a series of five community profiles—provides the background data necessary for a deeper understanding of community demographics, the varied impacts of job loss by industry, occupation, and demographic, rising opportunities in each community, and opportunities to reimagine the future of work. We explored the following research questions to guide this foundational study:

- What is the educational, linguistic, transportation, and digital literacy profile of each community?
- What industries are most vulnerable to the negative impacts of COVID-19? What is the possible short-term impact on key occupations? What do unemployment insurance application numbers indicate regarding demographics of job loss and occupations losing workers?
- What are the 1) transit accessible, 2) high-demand, 3) high-wage, 4) low-pandemic-vulnerability, and 5) high-skill jobs in each community?

Why this Report Matters

As we look to the future and work to build an economy that works for everyone, we must start with local insights and community voices. This report is a place to begin the conversations that will spark our collective next steps. To learn more about what Ramsey County Workforce Solutions is doing with these findings and get involved in Reimagining Ramsey County, contact Ling Becker at ling.becker@co.ramsey.mn.us.

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REIMAGINING RAMSEY COUNTY

Volume 2

Suburban Ramsey County

RealTime Talent

August 2020



RealTime Talent

Using data to build the
world's best workforce

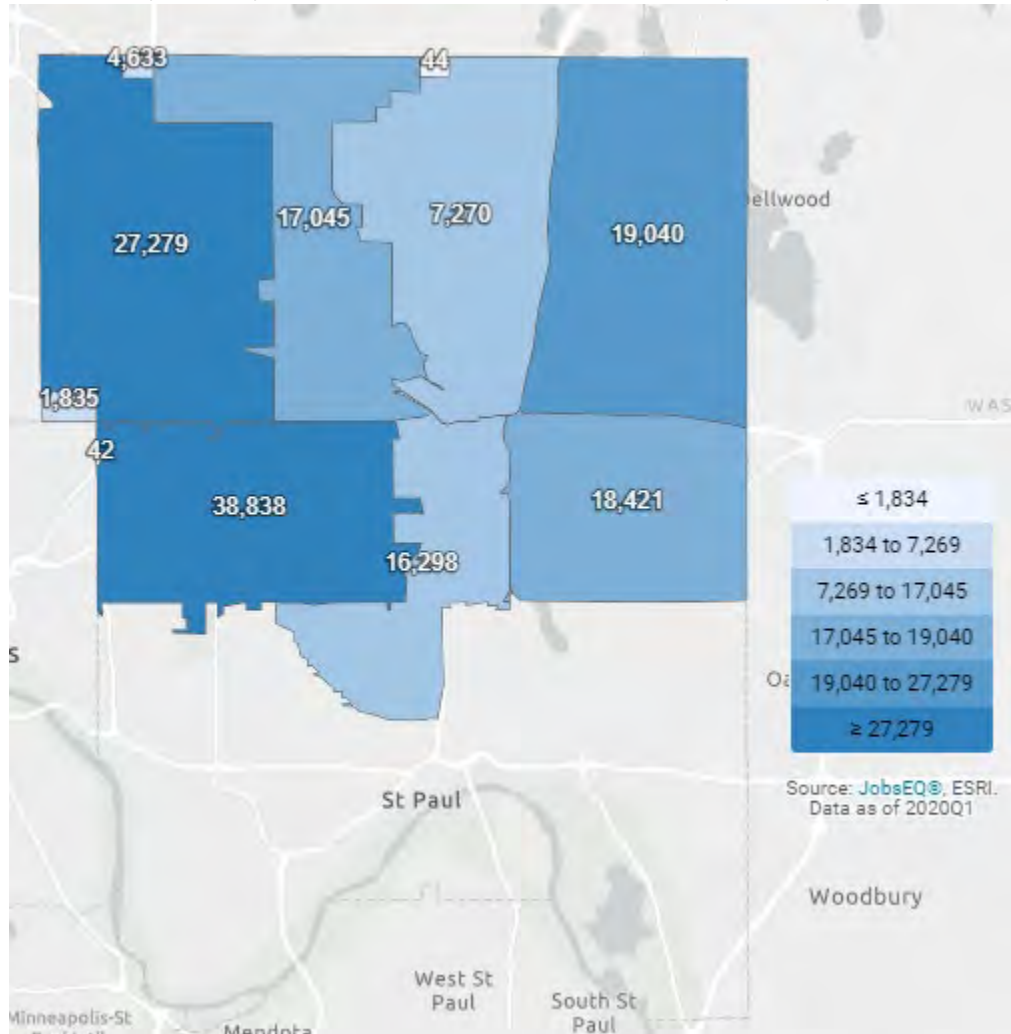


RAMSEY COUNTY
Workforce Solutions

Introduction

The suburban communities of Ramsey County include Maplewood, White Bear Lake, Vadnais Heights, Shoreview, Mounds View, Little Canada, Roseville, North Oaks, Gem Lake, North St. Paul, Lauderdale, Falcon Heights, New Brighton, Arden Hills, and the north-east corner of the North End neighborhood. These communities can be estimated by zip codes 55117, 55109, 55112, 55113, 55127, and the Ramsey County portions of 55038, 55126, 55418, 55421, 55449. By population, the largest number of people live in zip code 55112, which straddle both sides of I-94 heading east out of downtown. An estimated 7,160 businesses work out of Suburban Ramsey County.

Estimated Employment by Place of Work in Suburban Ramsey County based on Zip Codes

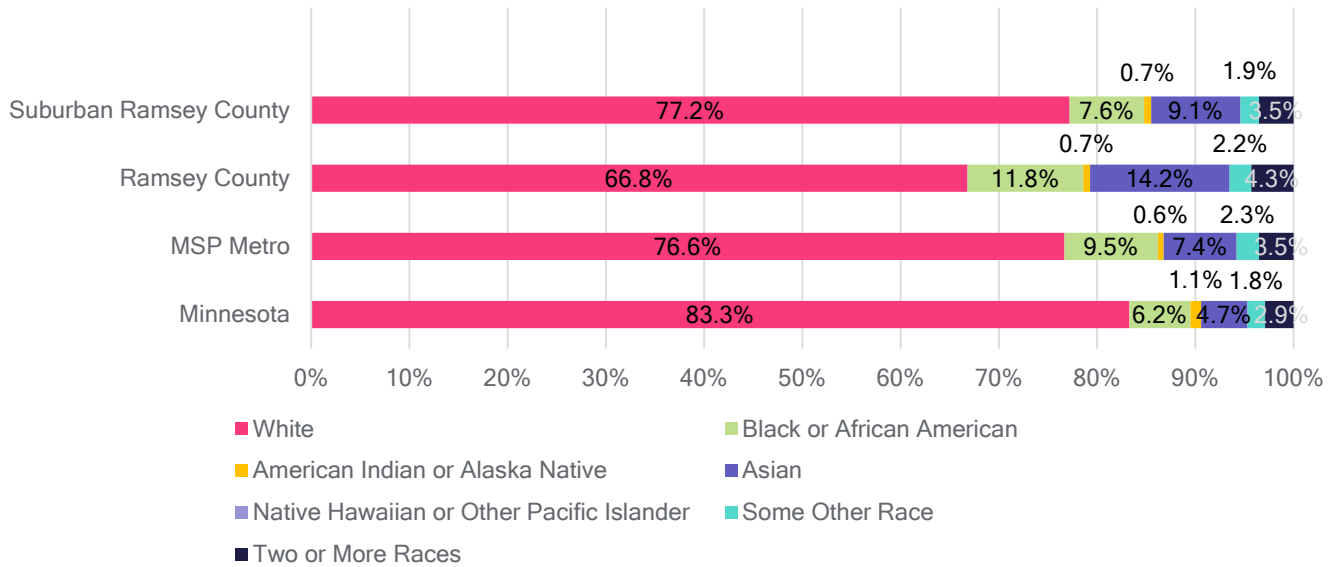


Community Profile

Demographics

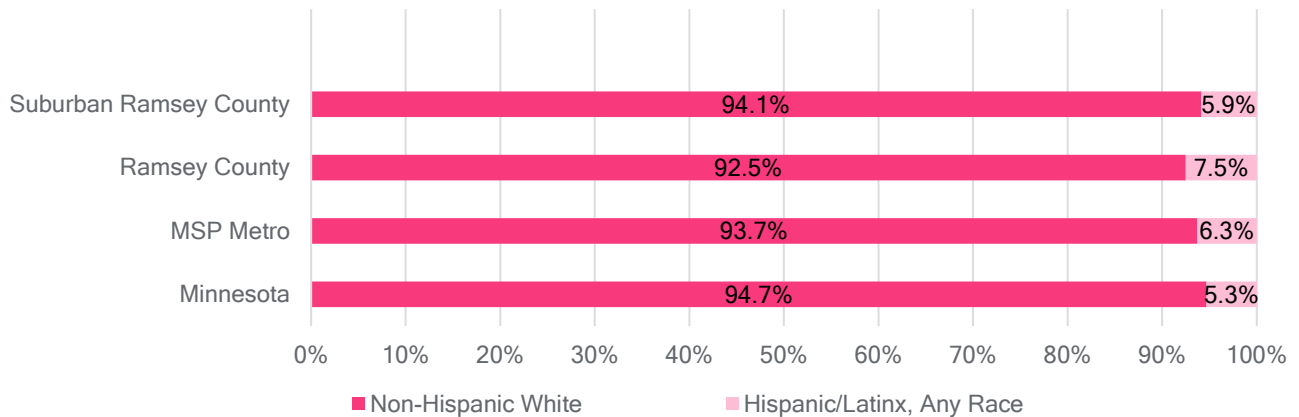
Suburban Ramsey County is less demographically diverse than Ramsey County overall; 22.8% of the population are non-Hispanic people of color, plus 5.9% identify as Hispanic or Latinx. The largest racial or ethnic group in Suburban Ramsey County after Non-Hispanic White is the Asian population, with 9.1% of residents of the Suburban Ramsey County identifying as Asian compared to 14.2% in Ramsey County overall.

Population Race, All Ages



American Community Survey 2014-2018.

Population Ethnicity, All Ages



American Community Survey 2014-2018.

Community Demographics

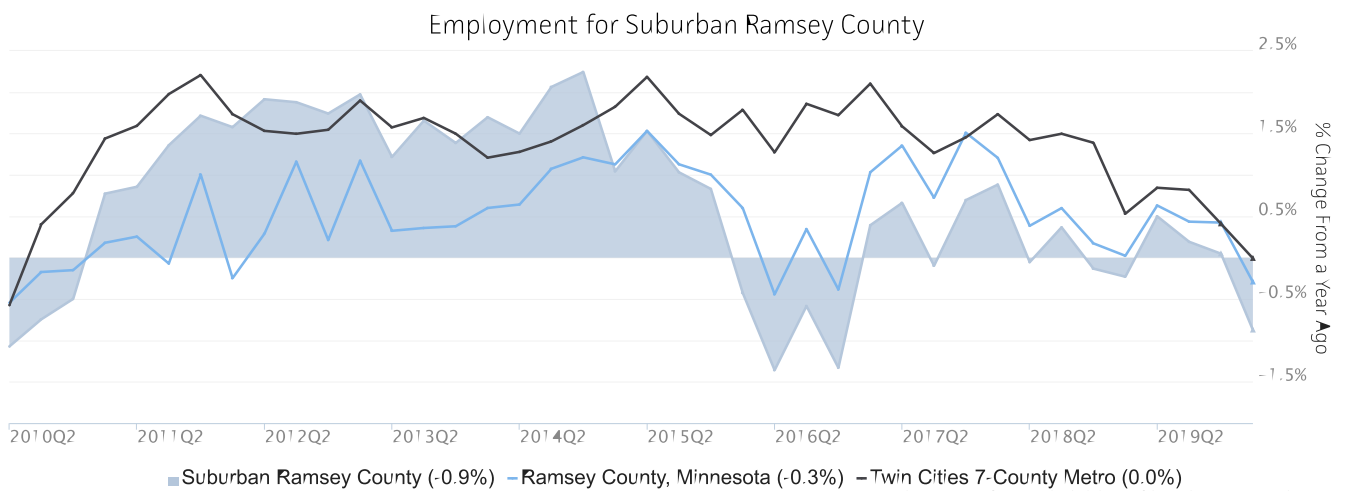
Demographics	Percent			Value		
	Suburban Ramsey County	Ramsey County, Minnesota	Twin Cities 7-County Metro	Suburban Ramsey County	Ramsey County, Minnesota	Twin Cities 7-County Metro
Population (ACS)	–	–	–	119,211	541,493	3,039,708
Male	48.6%	48.7%	49.4%	175,471	263,843	1,500,624
Female	51.4%	51.3%	50.6%	185,449	277,650	1,539,084
Median Age*	–	–	–	38.8	34.9	36.8
Under 18 Years	22.8%	23.4%	23.6%	82,360	126,490	717,668
18 to 24 Years	7.8%	10.2%	8.7%	28,138	55,420	263,378
25 to 34 Years	14.9%	16.6%	15.1%	53,640	89,740	459,585
35 to 44 Years	12.6%	12.0%	13.1%	45,470	65,173	399,319
45 to 54 Years	12.5%	11.8%	13.5%	45,044	63,728	410,408
55 to 64 Years	13.6%	12.3%	12.8%	49,193	66,694	390,595
65 to 74 Years	8.8%	7.8%	7.7%	31,806	42,271	234,633
75 Years, and Over	7.0%	5.9%	5.4%	25,269	31,977	164,122
Race: White	77.2%	66.8%	76.6%	278,783	361,501	2,328,568
Race: Black or African American	7.6%	11.8%	9.5%	27,252	63,724	288,828
Race: American Indian and Alaska Native	0.7%	0.7%	0.6%	2,366	3,723	18,437
Race: Asian	9.1%	14.2%	7.4%	32,997	77,156	225,056
Race: Native Hawaiian and Other Pacific Islander	0.0%	0.0%	0.0%	137	192	1,157
Race: Some Other Race	1.9%	2.2%	2.3%	6,753	12,028	70,602
Race: Two or More Races	3.5%	4.3%	3.5%	12,632	23,169	107,060
Hispanic or Latino (of any race)	5.9%	7.5%	6.3%	21,174	40,569	192,028

American Community Survey 2014-2018 unless noted otherwise.

*Median values for certain aggregate regions (such as MSAs) may be estimated as the weighted averages of the median values from the composing counties.

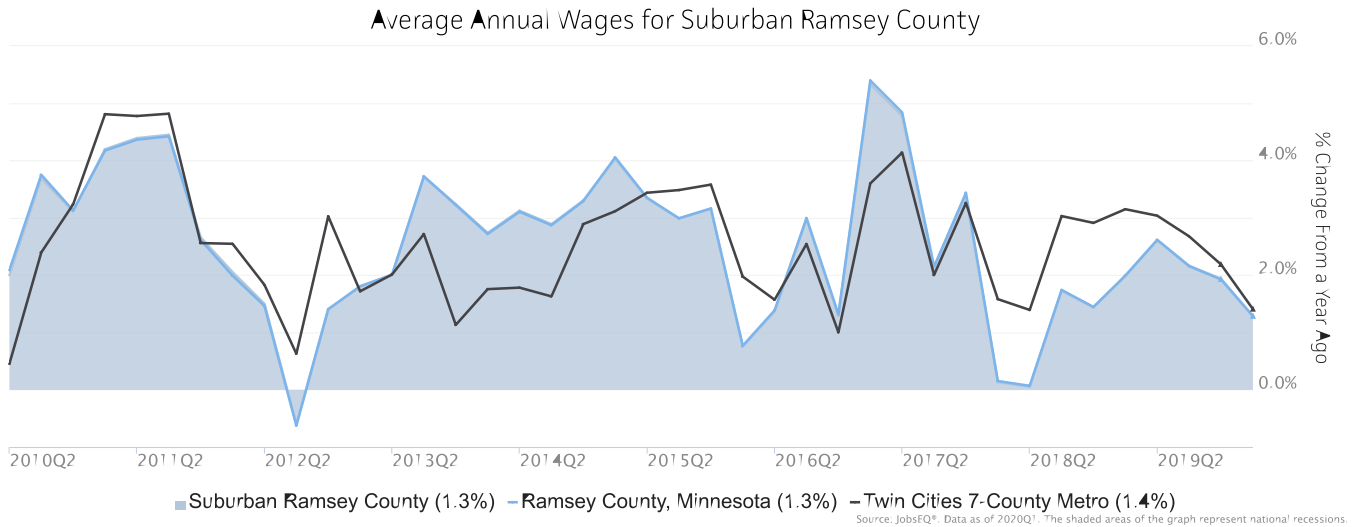
Employment

As of 2020Q1, total employment for residents of Suburban Ramsey County was 150,746 (based on a four-quarter moving average). Over the year ending 2020Q1, employment declined 0.9% in the region.

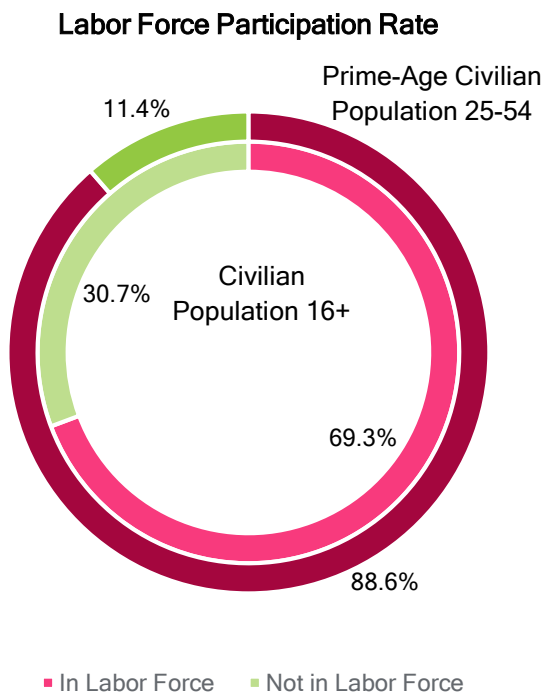


Employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2019Q3 with preliminary estimates updated to 2020Q1.

The average worker in the Suburban Ramsey County earned annual wages of \$62,889 as of 2020Q1. Average annual wages per worker increased 1.3% in the region over the preceding four quarters. For comparison purposes, annual average wages were \$57,624 in the nation as of 2020Q1.



Annual average wages per worker data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and imputed where necessary. Data are updated through 2019Q3 with preliminary estimates updated to 2020Q1.



Residents of Suburban Ramsey County have a higher rate of labor force participation than in Ramsey County overall (Ramsey County Labor Force Participation is 86% for prime working age and 69% for all), perhaps in part due to this neighborhood having a fewer number of single parent households (22,380 or 28.1% of households) and residents with disabilities (18,869 or 8.5% of residents) than seen in many other communities of the Ramsey County. It may also be that this community has fewer residents who may be ineligible to work, as just over a quarter (11.9%) of Suburban Ramsey County residents are foreign born. This community has a lower proportion of uninsured residents (4.3%) households receiving food stamps (8.6%), and disconnected youth (1.1%) compared to other communities of Ramsey County. The largest share of disconnected youth by population are in the City of Roseville (1.0%) on the northwest boundary of St. Paul. The City of North St. Paul has largest share of adults between the ages of

25 and 64 without a high school diploma or GED (9.1%). The largest share of residents who commute to work or school by public transportation are in the City of Falcon Heights (14.1%). The median age in Suburban Ramsey County is 38.8 years old, compared to 34.9 in Ramsey County overall. North Oaks has the highest median age (55.2).

Economic and Social Characteristics of Suburban Ramsey County

Economic and Social Characteristics	Percent			Values		
	Suburban Ramsey County	Ramsey County, Minnesota	7-County MSP Metro	Suburban Ramsey County	Ramsey County, Minnesota	7-County MSP Metro
Labor Force Participation Rate and Size (civilian population 16 years and over)	69.3%	69.0%	72.1%	199,062	295,458	1,730,688
Prime-Age Labor Force Participation Rate and Size (civilian population 25-54)	88.6%	86.0%	88.7%	127,525	187,867	1,125,534
Armed Forces Labor Force	0.1%	0.0%	0.1%	171	214	1,274
Veterans, Age 18-64	3.5%	2.9%	3.5%	7,677	9,950	67,574
Veterans Labor Force Participation Rate and Size, Age 18-64	78.8%	75.8%	81.5%	6,046	7,538	55,073
Median Household Income*	–	–	–	\$73,786	\$62,304	\$77,034
Per Capita Income	–	–	–	\$38,053	\$34,049	\$40,637
Poverty Level (of all people)	9.4%	14.7%	9.4%	33,508	77,330	282,384
Households Receiving Food Stamps/SNAP	8.6%	12.8%	8.2%	12,240	26,850	96,883
Enrolled in Grade 12 (% of total population)	1.4%	1.4%	1.5%	5,047	7,827	46,253
Disconnected Youth**	1.1%	2.1%	1.5%	190	597	2,270
Children in Single Parent Families (% of all children)	28.1%	35.8%	27.9%	22,380	43,659	193,871
Uninsured	4.3%	5.5%	4.6%	15,267	29,542	139,536
With a Disability, Age 18-64	8.5%	10.0%	8.0%	18,869	33,948	152,512
With a Disability, Age 18-64, Labor Force Participation Rate and Size	51.1%	47.0%	53.4%	9,650	15,945	81,517
Foreign Born	11.9%	15.6%	12.0%	42,944	84,379	363,294

American Community Survey 2014-2018 unless noted otherwise.

*Median values for certain aggregate regions (such as MSAs) may be estimated as the weighted averages of the median values from the composing counties. **Disconnected Youth are 16-19-year-olds who are (1) not in school, (2) not high school graduates, and (3) either unemployed or not in the labor force.

Education



93.6% of prime working age adult residents have at least a high school diploma or GED.

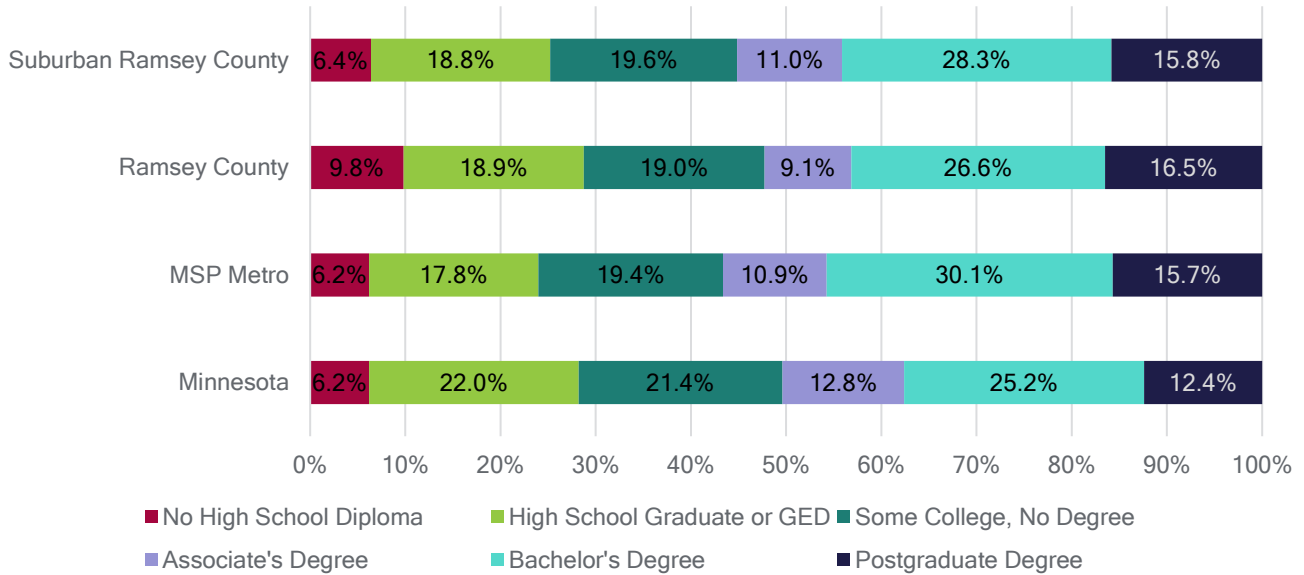
The residents of Suburban Ramsey County have a level of educational attainment similar to Ramsey County as a whole and the 7-County MSP Metro in most categories. The largest difference between Suburban Ramsey County and Ramsey County as a whole was 3.4 percentage points in the residents between ages 25 and 64 who do not have a high school diploma.

Educational Characteristics of Suburban Ramsey County

Educational Characteristics	Percent			Values		
	Suburban Ramsey County	Ramsey County, Minnesota	7-County MSP Metro	Suburban Ramsey County	Ramsey County, Minnesota	7-County MSP Metro
No High School Diploma	6.4%	9.8%	6.2%	12,452	28,060	103,067
High School Graduate	18.8%	18.9%	17.8%	36,409	54,037	295,274
Some College, No Degree	19.6%	19.0%	19.4%	37,950	54,211	321,288
Associate's Degree	11.0%	9.1%	10.9%	21,233	25,991	180,284
Bachelor's Degree	28.3%	26.6%	30.1%	54,809	75,814	499,663
Postgraduate Degree	15.8%	16.5%	15.7%	30,494	47,222	260,331

American Community Survey 2014-2018 unless noted otherwise.

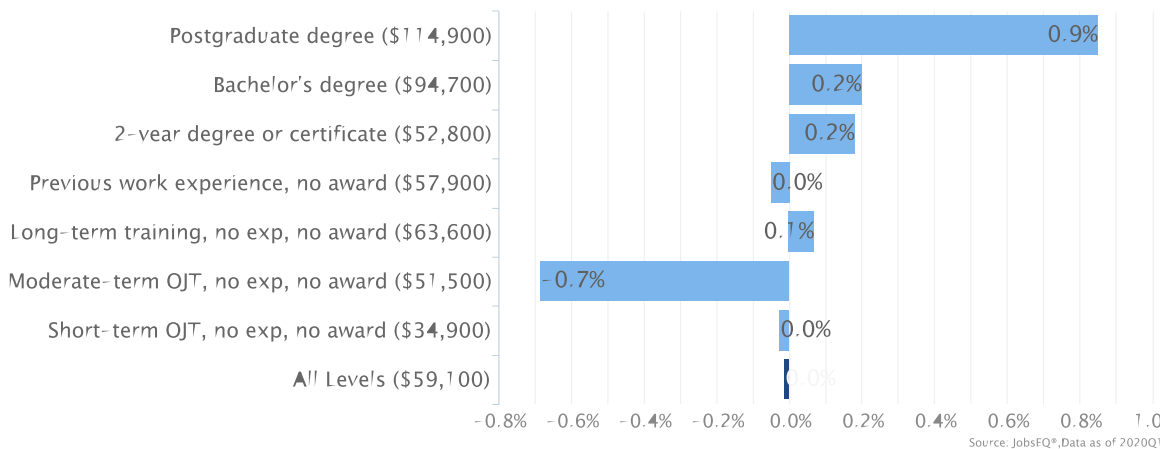
Educational Attainment, Age 25-64



American Community Survey 2014-2018.

Expected growth rates for occupations vary by the education and training required. While all employment in the Suburban Ramsey County is not projected to contract over the next ten years, occupations typically requiring a postgraduate degree are expected to grow 0.9% per year, those requiring a bachelor's degree are forecast to grow 0.2% per year, and occupations typically needing a 2-year degree or certificate are expected to grow 0.2% per year.

Annual Average Projected Job Growth by Training Required for Suburban Ramsey County



Source: JobsEQ*, Data as of 2020Q1

Employment by occupation data are estimates as of 2020Q1. Education levels of occupations are based on BLS assignments. Forecast employment growth uses national projections from the Bureau of Labor Statistics adapted for regional growth patterns.

Transportation



7,966 residents
Commute via public transit (4.2%)

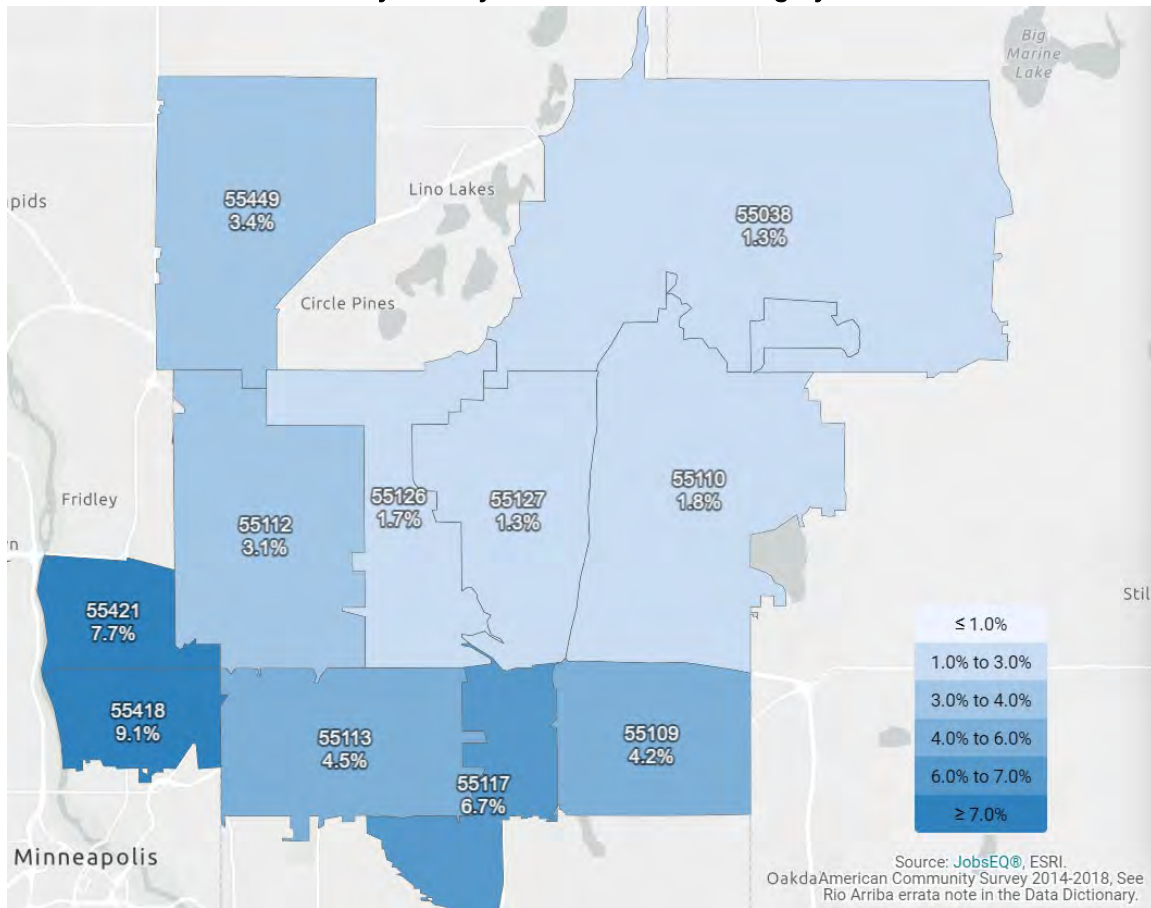
24.6 Minute



Mean Commute Time

10,859 Residences have no vehicle available
(7.7% of all occupied residences)

Suburban Ramsey County Residents Commuting by Public Transit



Transportation Characteristics of Suburban Ramsey County

Transportation Characteristics	Percent			Values		
	Suburban Ramsey County	Ramsey County, Minnesota	7-County MSP Metro	Suburban Ramsey County	Ramsey County, Minnesota	7-County MSP Metro
Mean Commute Time (minutes)	-	-	-	24.6	23.9	24.7
Commute via Public Transportation	4.2%	6.7%	5.3%	7,966	18,565	87,307
Occupied Housing Units with No Vehicle Available (% of Occupied Units)	7.7%	10.5%	7.8%	10,859	21,937	91,325

American Community Survey 2014-2018 unless noted otherwise.

Language



6.8% of residents over age 5 speak English less than “very well” (a total of 22,895 residents)

77.1% of Ramsey County residents over age 5 speak ONLY English (a total of 388,179 residents)

- 11.5% Asian/Pacific Island Languages
- 5.2% Spanish
- 3.7% Other Languages (African, etc.)
- 2.4% Indo-European Languages

Language Characteristics of Suburban Ramsey County

Language Characteristics	Percent			Values		
	Suburban Ramsey County	Ramsey County, Minnesota	7-County MSP Metro	Suburban Ramsey County	Ramsey County, Minnesota	7-County MSP Metro
Speak English Less Than Very Well (population 5 yrs and over)	6.8%	10.8%	6.6%	22,895	54,243	187,303

American Community Survey 2014-2018 unless noted otherwise.

Primary Languages Spoken in Ramsey County, Ages 5+

English	378,245	80.71%
All languages other than English combined	90,411	19.29%
Hmong	27,858	5.94%
Spanish	24,405	5.21%
African languages	10,883	2.32%
Chinese	3,578	0.76%
Other Asian languages	2,847	0.61%
Vietnamese	2,621	0.56%
French	2,504	0.53%
German	2,018	0.43%
Laotian	1,264	0.27%
Mon-Khmer, Cambodian	1,200	0.26%
Korean	953	0.20%
Arabic	898	0.19%
Tagalog	836	0.18%
Russian	773	0.16%
Thai	721	0.15%
Hindi	720	0.15%
Other Indic languages	676	0.14%
Other Indo-European languages	637	0.14%
Japanese	549	0.12%
Italian	538	0.11%
Polish	496	0.11%
Scandinavian languages	488	0.10%
Other specified North American Indian languages	462	0.10%
Other Slavic languages	380	0.08%
Hebrew	284	0.06%
Portuguese	259	0.06%
Urdu	259	0.06%
Serbo-Croatian	239	0.05%
Other West Germanic languages	202	0.04%
Total:	468,656	

U.S. Census Bureau, 2010 Decennial Census (5-year summary data, collected 2006-2010). Detailed language data available every 10 years.

Digital Literacy

Access to Internet



3% to 23% of households in each census tract have no access to the internet.

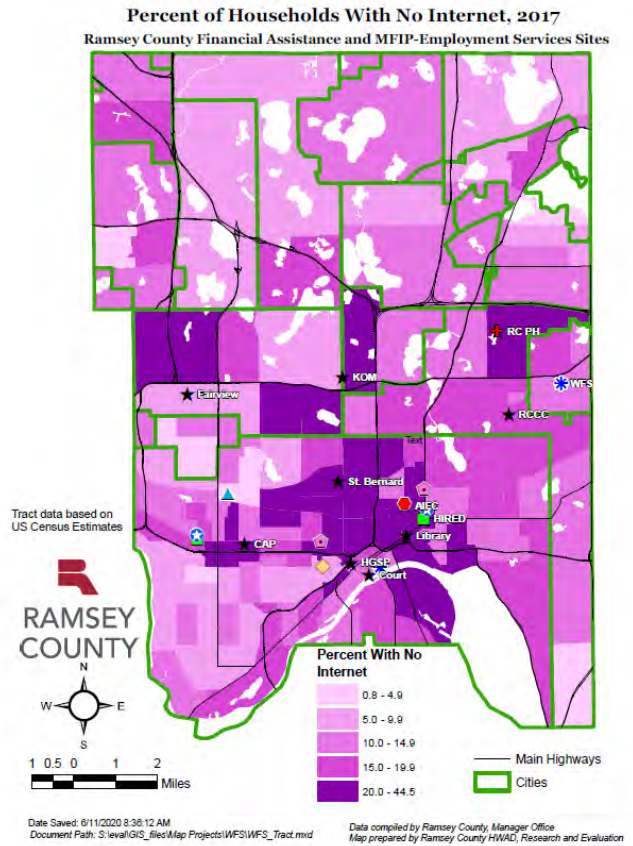
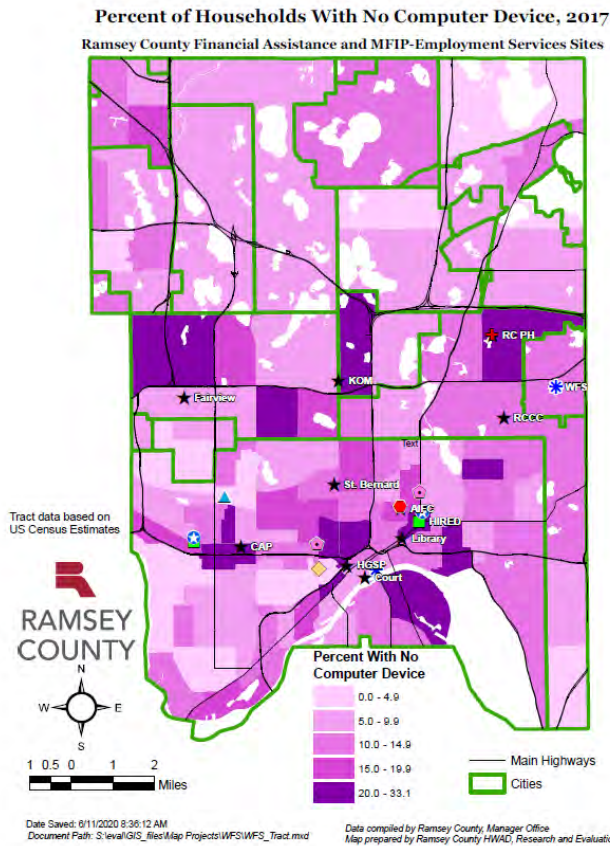
American Community Survey, 2017.

Access to Technology



0% to 24% of households in each census tract have no access to a computer device.

American Community Survey, 2017.



Digital Skills



36% of Basic Computer Skills assessments received a passing score on the first try in 2019, 33% of Internet Basics, and 56% of Email assessments.

Northstar Digital Literacy, a program of Literacy Minnesota

North Star Digital Literacy, a program of Minnesota Literacy, offers online assessment modules, curricula resources, and learning tools to help organizations identify gaps and improve digital literacy in their client populations.

In Suburban Ramsey County, Northstar Digital Literacy sites¹ administered 1289 skills assessments in twelve key areas that represent the first attempt of tester-takers seeking to earn certificates and badges during a six month period.² Among the most frequent assessments administered in Suburban Ramsey County in 2019, 36% of Basic Computer Skills assessments received a passing score on the first try, 33% of Internet Basics, and 56% of Email. Member organizations administered 653 assessments in Suburban Ramsey County during the first half of 2020, which is equivalent to previous time periods.

Number of Digital Literacy Assessments with Passing Scores on the First Try in Basic Computer Skills, Internet Basics, and Email within a Six-month Period, Suburban Ramsey County

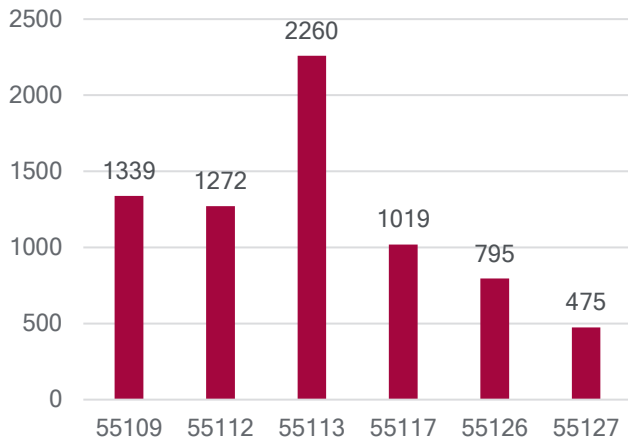
Subject	First Half of 2019		Second Half of 2019		First Half of 2020	
	Passed	Total	Passed	Total	Passed	Total
Basic Computer Skills	38% (84)	219	32% (48)	149	40% (91)	231
Internet Basics	26% (37)	141	43% (37)	86	39% (46)	118
Email	54% (46)	85	59% (33)	56	68% (42)	62

¹ Northstar Digital Literacy is a program of Literacy Minnesota, and Northstar locations are subscription sites independent of Literacy Minnesota/Northstar. Learn more about Northstar Digital Literacy and find test sites at <https://www.digitalliteracyassessment.org/>. Passing a given digital literacy assessment in a specific area does not indicate digital literacy skills in other areas. Numbers in the report reflect distinct first takes within the six-month period.

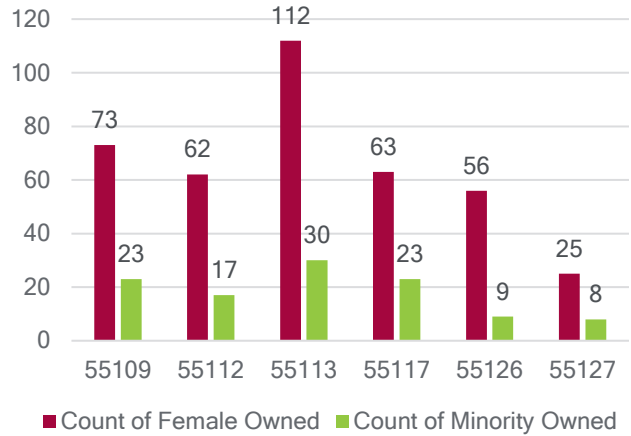
Businesses

According to DatabaseUSA, there are about 7,160 businesses located on Suburban Ramsey County. About 32% (2,260 businesses) are located in the zip code 55113. Of all Suburban Ramsey County businesses, just 391 are confirmed to be female-owned, and 110 are confirmed to be “minority-owned.”

Businesses in Suburban Ramsey County

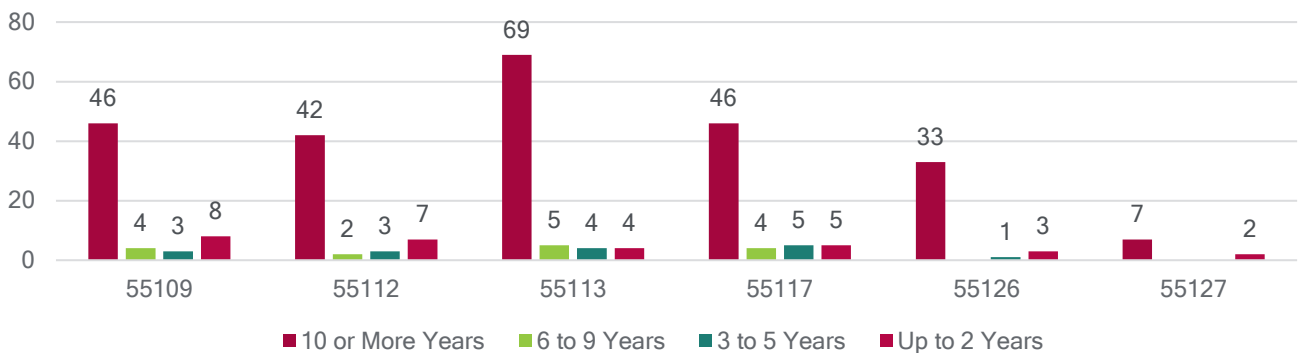


Female & Minority-Owned Businesses in Suburban Ramsey County

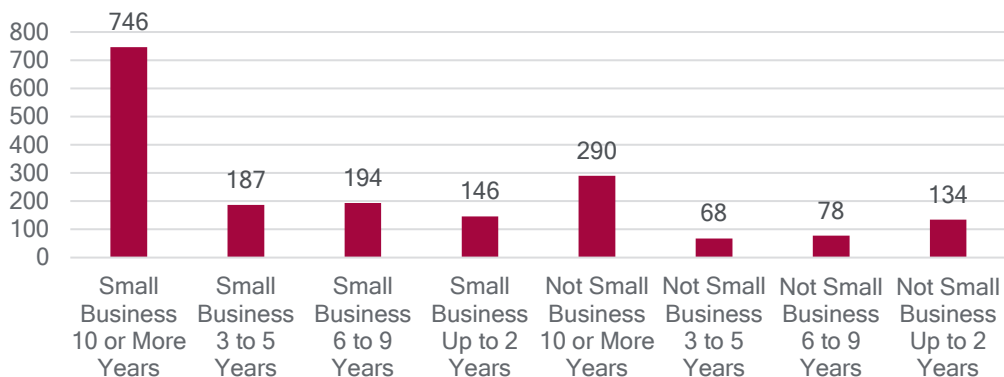


Among the 303 local non-profit organizations, the vast majority have been in existence for ten or more years, with very few young organizations in the community. The majority of for-profit businesses in the area are small businesses.

Non-Profits in Suburban Ramsey County



Businesses by Years in Business in Suburban Ramsey County



Workforce Impacts of COVID-19

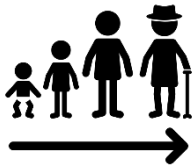
Community Vulnerability

Because COVID-19 is a new disease, more work is needed to better understand the risk factors for severe illness or complications. Potential risk factors that have been identified by the Center for Disease Control (CDC) to date include:

- Age
- Race/ethnicity
- Gender
- Some medical conditions
- Use of certain medications
- Poverty and crowding
- Certain occupations
- Pregnancy

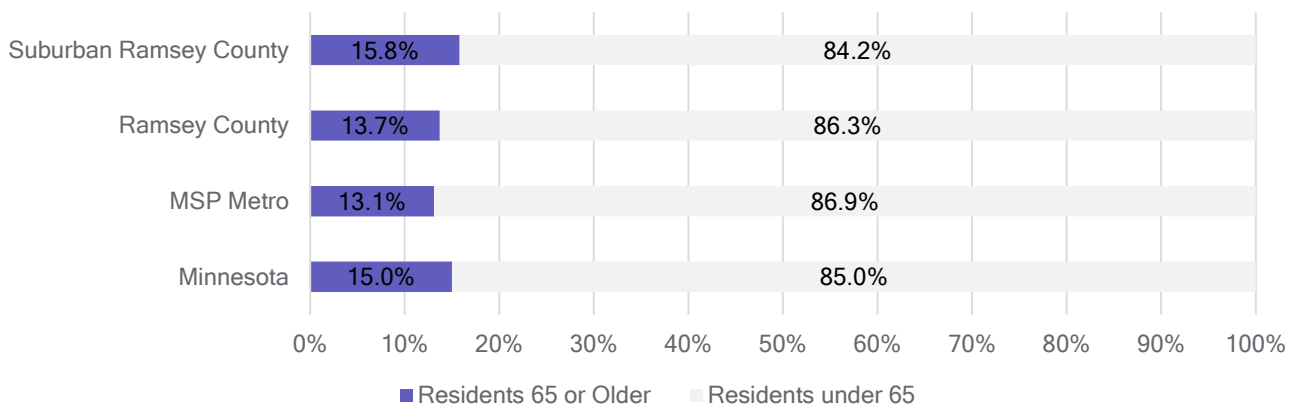
Older adults and people with medical conditions are at increased risk for severe illness. People who may need extra precautions, as prevalence of the virus is higher for these groups, include racial and ethnic minority groups, people living in rural communities, and people experiencing homelessness. Additional groups advised by the CDC to take additional precautions are those who may have more complex treatment needs if they were to fall seriously ill, such as people who are pregnant or breastfeeding, people with disabilities, and people with developmental or behavioral disorders.

AGE



Suburban Ramsey County has a **HIGHER** share of residents 65 or older (15.8% of residents).

Residents 65+



American Community Survey 2014-2018.

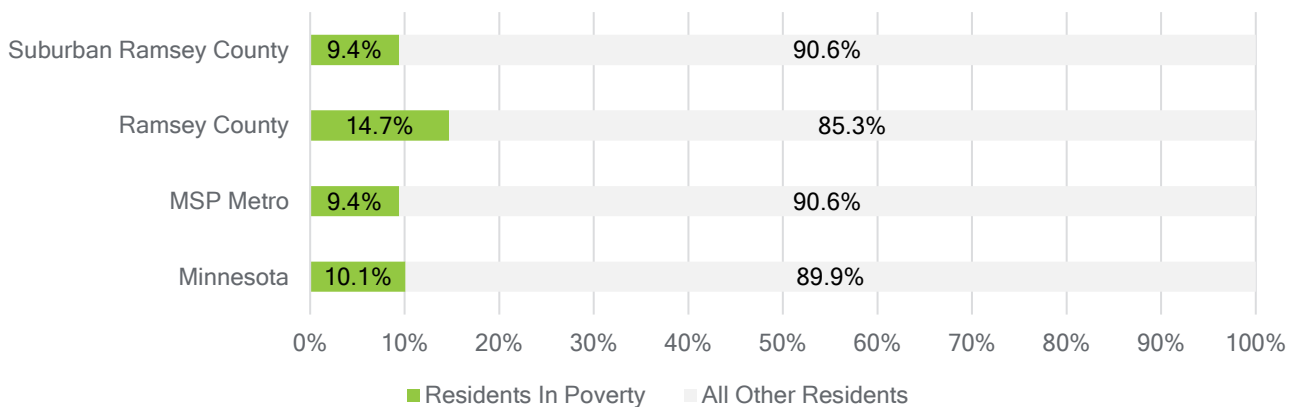
POVERTY



Suburban Ramsey County has a **LOWER** share of residents living in poverty (9.4%).

The per-capita income of residents of Suburban Ramsey County is \$38,053 which is about \$4,000 higher than the per-capita income of Ramsey County residents overall (\$34,049). About one in eleven (9.4%) Suburban Ramsey County residents lives in poverty, and just over one in twelve (8.6%) receive food stamps, compared to 14.7% and 12.8% across Ramsey County, respectively.

Residents in Poverty



American Community Survey 2014-2018.

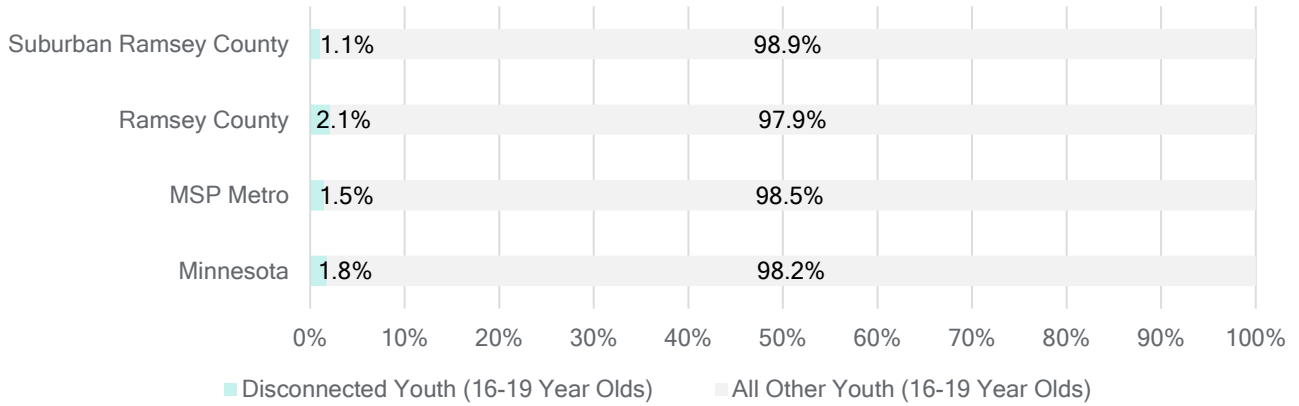
DISCONNECTED YOUTH



Suburban Ramsey County has a **LOWER** share of disconnected youth (1.1%).

Suburban Ramsey County has about 190 disconnected youth, which is about 1.1% of the total population of people between the ages of 16 and 19. These youth are not in school, not high school graduates, and are either unemployed or not in the labor force. Suburban Ramsey County's disconnected youth represent about 4% of all disconnected youth in the state (5,025 total statewide).

Disconnected Youth



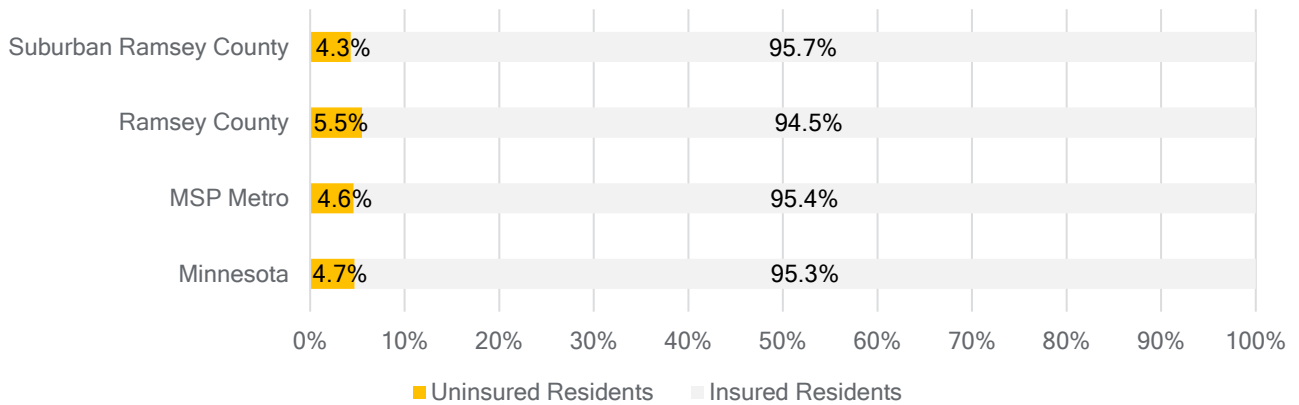
American Community Survey 2014-2018.

UNINSURED



Suburban Ramsey County has a **LOWER** share of residents without health insurance (4.3%).

Uninsured Residents



American Community Survey 2014-2018.

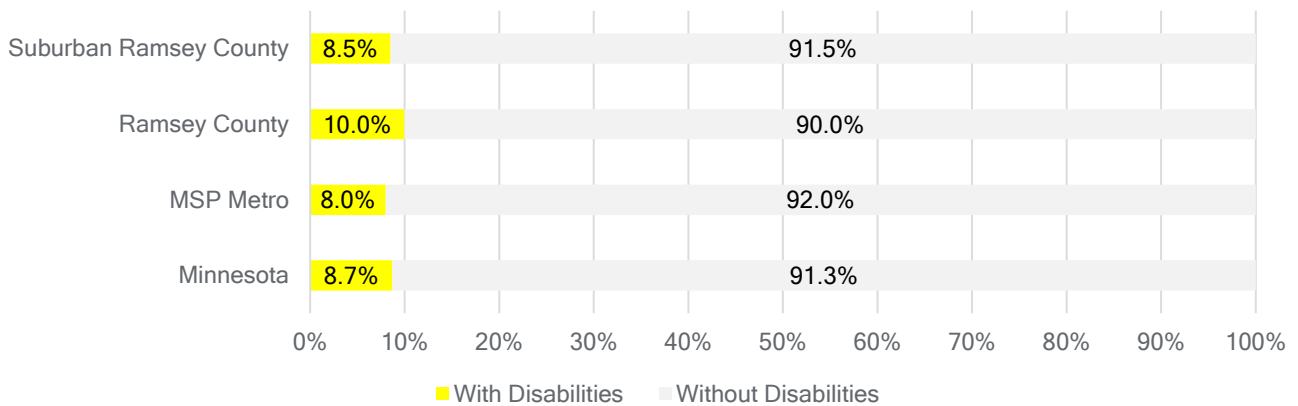
DISABILITY



Suburban Ramsey County has a **LOWER** share of residents with disabilities (8.5%).

Suburban Ramsey County has a smaller share of prime working age adults with disabilities, with about 18,869 adults (8.5%) having some form of disability. Of these, 51.1% participate in the labor force (9,650 total working or seeking work), compared to 52.5% statewide.

Residents with Disabilities, Ages 18-64



American Community Survey 2014-2018.

HOMELESSNESS



About 1,579 Ramsey County residents (0.3%) experienced homelessness in January 2019, and an estimated 3,298 (0.6% of residents) accessed emergency shelter services in 2019.

According to the Ramsey County Homelessness Management Information System (HMIS), 3,298 people accessed emergency shelter services in Ramsey County in 2019—or about one in every 200 people residing in Ramsey County. On a single night in January 2019, there were 1,579 Point-in-Time (PIT) individuals experiencing homelessness, including those in emergency shelters, transitional housing, unsheltered, or in other outdoor places. The majority of people counted in the PIT estimates were utilizing emergency shelters. Black and American Indian people are much more likely to experience homelessness than other groups, with Black individuals being eight times more likely and American Indian people 13 times more likely to experience homelessness than White people in Ramsey County. According to PIT estimates, about 27% of Ramsey County residents experiencing homelessness in 2019 were children.

Ramsey County Residents Experiencing Homelessness



Ramsey County, 2019. <https://opendata.ramseycounty.us/Health-and-Environment/Total-Homeless/h9kg-nnh5>

Industry Vulnerability

The Economic Vulnerability Index is a measurement developed by Chmura Economics to estimate the negative impact that the coronavirus crisis can have on employment based upon a community's mix of industries.³ For example, accommodation and food services are projected to lose more jobs as a result of the coronavirus (over half of jobs lost, on average across the broad industry category) compared to utilities and education services (with mild or no job contractions in most cases). Overall, this index measures the possible impact in a community dependent upon the local industry mix—it does not take into account variation due to a region's rate of viral infection, health services, policies, or other considerations.

According to Chmura Economics, “the average Vulnerability Index score is 100, representing the average job loss expected in the United States. Higher scores indicate the degree to which job losses may be greater—an index of 200, for example, means the rate of job loss can be twice as large as the national average. Conversely, an index of 50 would mean a possible job loss of half the national average.” In the MSP Metro, Scott County may have as much as 20% higher job losses, while Ramsey County may have about 18% lower job losses than the national average.

Economic Vulnerability of MSP Metro Counties by Industry Mix, July 2020

MSP Metro Counties	Vulnerability Index	National Rank
Scott County	119.58 ↘	252 ↘
Washington County	117.73 ↗	276 ↗
Dakota County	104.03 ↗	591 ↗
Anoka County	103.07 ↗	635 ↗
Carver County	95.46 ↘	1,019 ↗
Hennepin County	93.01 ↗	1,176 ↗
Ramsey County	81.76 ↘	1,795 ↗

Economic Vulnerability Index model from Chmura Economics & Analytics

³ Chmura Economics, April 2020. <http://www.chmuraecon.com/interactive/covid-19-economic-vulnerability-index/>

Note: Trendline indicates whether the county improved or lost rank from the first forecasts put forth in March. Downward arrow indicates improved ranking. Scott County remains in the top 8% for expected impact out of 3,141 counties nationwide.

An estimated 13% of local occupations by industry in Suburban Ramsey County are vulnerable to the immediate-term impacts of COVID-19.

Short-Term Industry Vulnerability to COVID-19 Pandemic, Suburban Ramsey County

Industry	Anticipated Short-Term Job Loss from COVID-19	Total Local Employment	Total Vulnerable Jobs
Accommodation and Food Services	60%	10,506	6,304
Arts, Entertainment, and Recreation	60%	2,967	1,780
Other Services (except Public Administration)	15%	7,009	1,051
Transportation and Warehousing	10%	4,977	498
Retail Trade	20%	16,255	3,251
Wholesale Trade	20%	6,859	1,372
Information	15%	2,712	407
Manufacturing	7%	21,436	1,501
Construction	7%	7,977	558
Mining, Quarrying, and Oil and Gas Extraction	5%	2	0
Real Estate and Rental and Leasing	5%	2,388	119
Health Care and Social Assistance	5%	21,241	1,062
Finance and Insurance	5%	6,013	301
Educational Services	5%	9,761	488
Administrative and Support and Waste Management and Remediation Services	2%	10,180	204
Agriculture, Forestry, Fishing and Hunting	2%	68	1
Public Administration	1%	3,325	33
Professional, Scientific, and Technical Services	1%	8,718	87
Management of Companies and Enterprises	1%	7,562	76
Utilities	1%	791	8
Total Jobs	13%	150,746	19,101

Economic Vulnerability Index model from Chmura Economics & Analytics

Occupational Vulnerability

Research by Dingel and Neiman⁴ and by Leibovici, Santacreu, and Famiglietti⁵ highlight occupations that cannot be done from home and are consistently high contact intensity. Following their models, a combination of occupational employment estimates as of the fourth quarter of 2020 employment in Suburban Ramsey County, coupled with an index of occupational contact-intensity from O*NET, gives us a picture of local occupations in high vulnerability due to their level of close proximity to patients or the general public. O*NET classifies positions based on a rating system of job requirements in close physical proximity to other people. The possible answers and corresponding scores are:

- I don't work near other people (beyond 100 ft.): 0
- I work with others but not closely (e.g. private office): 25
- Slightly close (e.g. shared office): 50
- Moderately close (at arm's length): 75
- Very close (near touching): 100

All occupations are then classified into low-medium and high contact-intensity categories based on scores of 0-50 (low), 50-75 (medium), and 75+ (high). Fifteen out of 107 occupations at the

⁴ Dingel, C. L., and B. Neiman (2020): "How Many Jobs Can be Done at Home?" *NBER Working Paper No. 26948*.

⁵ Leibovici, F., A. M. Santacreu, and M. Famiglietti (2020): "Social Distancing and Contact-Intensive Occupations," FRB St. Louis Technical Report, URL: <https://www.stlouisfed.org/on-the-economy/2020/march/social-distancing-contact-intensive-occupations#:~:text=Food%20and%20beverage%20serving%20workers%20are%20at%20the%20bottom%20of,K%20to%2012th%20grade%20teachers.>

four-digit Standard Occupation Level (SOC) are considered high contact-intensity. The occupation cluster of highest contact intensity are Barbers, Hairstylists, and Cosmetologists, with a physical proximity index of 92.17. Other occupations that are contact-intensive include teachers, health care workers, and a multitude of roles in the service industry. Minnesota has around 21% of workers in high contact-intensity roles, on the lower end of states ranging from 20% to 25% overall.

Suburban Ramsey County has an equivalent share of high contact-intensity positions as Minnesota overall, with about 22% of individuals employed in the first quarter of 2020 being employed in high contact-intensity positions. The majority of these were in direct health care support roles, health diagnosing and treating roles, food and beverage service roles, or motor vehicle operation roles. Of these, the healthcare positions are expecting the greatest volume in annual growth over the next five years. In all, about 26% of new positions opening up due to job exits, job changes, or job growth under normal economic conditions would be for high contact-intensity positions in Suburban Ramsey County. Across Ramsey County, these high contact-intensity roles pay an average \$51,300 per year compared to \$50,500 for jobs located on Suburban Ramsey County.

Summary Statistics of High Contact-Intensity Positions in Suburban Ramsey County, 2020Q1

SOC	Occupation	Proximity Index	Annual Supply Gap	Current Empl. 2020Q1	Annual Growth Demand	Annual Sep Demand	Total Annual Demand	Projected Empl 2030	Accum. Supply 2025	Accum. Demand 2025	Avg Wages
31-2000	Occupational Therapy and Physical Therapist Assistants and Aides	90.5	(1)	125	3	22	25	151	52	57	\$55,000
31-1100	Home Health and Personal Care Aides; and Nursing Assistants, Orderlies, and Psychiatric Aides	90.3	(1)	5,932	116	1,233	1,349	7,096	2,828	2,835	\$31,300
35-1000	Supervisors of Food Preparation and Serving Workers	88.0	4	913	4	180	184	957	445	423	\$42,800
29-1000	Healthcare Diagnosing or Treating Practitioners	86.2	(53)	4,573	39	351	390	4,960	757	1,022	\$113,000
39-1000	Supervisors of Personal Care and Service Workers	84.5	(2)	292	2	41	43	310	97	107	\$45,200
29-2000	Health Technologists and Technicians	82.7	(21)	2,404	15	250	266	2,556	580	686	\$52,600
31-9000	Other Healthcare Support Occupations	80.2	(7)	1,384	16	234	250	1,547	540	575	\$46,900
25-2000	Preschool, Elementary, Middle, Secondary, and Special Education Teachers	79.5	(16)	3,232	20	366	386	3,431	917	994	\$65,400
25-3000	Other Teachers and Instructors	79.0	(2)	1,028	6	182	188	1,090	401	409	\$44,600
53-3000	Motor Vehicle Operators	75.6	3	4,746	-1	781	780	4,739	1,814	1,798	\$46,100
39-9000	Other Personal Care and Service Workers	75.5	17	2,006	8	453	461	2,081	1,089	1,002	\$34,600
35-3000	Food and Beverage Serving Workers	75.2	111	6,790	37	1,795	1,831	7,158	4,327	3,771	\$28,000
All High Contact-Intensity Occupations				33,425	265	5,888	6,153	36,076	13,847	13,679	\$50,500
Total - All Occupations				150,746	-14	23,434	23,417	150,577	58,095	56,518	\$59,800
Share High Contact-Intensity				22%	MOD	25%	26%	24%	24%	24%	

Employment based on local QWI data by zip code modeled by JobsEQ to 2020Q1 and represents employment by place of work (i.e. positions located in Suburban Ramsey County).

The ongoing pandemic affects each of these occupations, though in different ways: for instance, with hospitality and food service roles being largely eliminated during the first three months of the pandemic, while essential occupations remained in high demand and experienced dramatic shortages of workers. Health Diagnosing and Treating Practitioners is one occupation area that has had extremely varied experiences, as some medical procedures not deemed essential were placed on hold for a period of time and sending many into furlough. Long-term, Health Diagnosing and Treating Practitioners are expected to be in shortage in Suburban Ramsey County and experiencing higher than average growth demand. Average wages for these roles are \$113,000 in the suburban area of the county and positions typically require a college degree. See more on detailed occupation impacts in the immediate-term through local unemployment application trends and the mid-term based on occupation supply-demand analysis.

Immediate-Term Occupational Impacts

Non-essential occupations that require a high-degree of close physical interaction have been hit hardest in the early weeks of the pandemic, as consumers reduced demand in pursuit of social distancing and regulation at state and local levels shut down business functions in high-contact roles. According to Leibovici and collaborating authors, “these occupations are likely to be more vulnerable to the shock, leading either to layoffs of nonessential workers or to an increase in the risk of contagion among those workers that have to stay in the workplace to perform essential activities. Carrying out some of these occupations remotely, when plausible, is likely to allow them to better absorb the negative shock.”⁶

Food and Beverage Serving Workers and Retail Sales Workers had the most applicants for unemployment in Ramsey County since the beginning of the COVID-19 Pandemic, representing over 15% of all applications. Both of these occupation groups are also found in large volumes in Suburban Ramsey County, representing about 10% of all local jobs together.

⁶ Ibid.

Unemployment Insurance Applicants by Top 20 Occupations Requesting Insurance in Ramsey County from March 16, 2020 - July 25, 2020, with Suburban Ramsey County Employment

Occupation Group	Unempl. Insurance Applicants in Ramsey County	% of Total Applicants in Ramsey County	2020Q1 Employment in Suburban Ramsey County	% of Total in Suburban Ramsey*
Food and Beverage Serving Workers	6,235	7.90%	6,790	4.5%
Retail Sales Workers	5,875	7.50%	8,840	5.9%
Cooks and Food Preparation Workers	3,589	4.60%	2,533	1.7%
Motor Vehicle Operators	3,496	4.40%	4,746	3.1%
Construction Trades Workers	3,240	4.10%	4,897	3.2%
Other Healthcare Support Occupations	3,196	4.10%	1,384	0.9%
Information and Record Clerks	2,961	3.80%	5,683	3.7%
Other Food Preparation and Serving Related Workers	2,704	3.40%	1,047	0.7%
Other Production Occupations	2,624	3.30%	3,517	2.3%
Health Diagnosing and Treating Practitioners	2,512	3.20%	4,573	3.0%
Personal Appearance Workers	1,959	2.50%	915	0.6%
Nursing, Psychiatric, and Home Health Aides	1,844	2.30%	5,932	3.9%
Other Office and Administrative Support Workers	1,694	2.20%	3,555	2.4%
Building Cleaning and Pest Control Workers	1,588	2.00%	3,109	2.1%
Health Technologists and Technicians	1,555	2.00%	2,404	1.6%
Other Education, Training, and Library Occupations	1,547	2.00%	1,669	1.1%
Other Personal Care and Service Workers	1,537	2.00%	2,006	1.3%
Other Management Occupations	1,483	1.90%	3,414	2.3%
Preschool, Primary, Secondary, and Special Education	1,207	1.50%	3,232	2.1%
Computer Occupations	1,187	1.50%	5,477	3.6%
Total - Top 20 Occupations Only	52,033	57.9%	150,746	

*Fields marked in orange are in the top ten percent of occupations by volume in Suburban Ramsey County. Worker occupation data based on local QWI data by zip code modeled by JobsEQ to 2020Q1 and represents employment by place of residence.

In Suburban Ramsey County, there is a greater share of people over the age of 35 in high contact-intensity roles than when compared to overall employment across all occupations. Individuals in these groups may be more likely to be exposed to the virus in their place of work, or experience layoffs associated with being in proximity to the public.

Occupations requiring a high school diploma or only some college education were disproportionately impacted by COVID-19 across Ramsey County. Suburban Ramsey County has a lower concentration of local workers who have low educational experience. By sex, females have applied for unemployment insurance at higher rates in Ramsey County than males. Although females comprise a smaller share of Suburban Ramsey County workforce, they represent 68.0% of local workers in high contact-intensity occupation groups. Similarly, Asian and Black/African American workers in Ramsey County have applied for unemployment insurance at higher rates than expected by their local employment rate. In Suburban Ramsey County, there are higher percentages of Asian and Black/African American workers in high contact-intensity occupations than the percent locally employed.

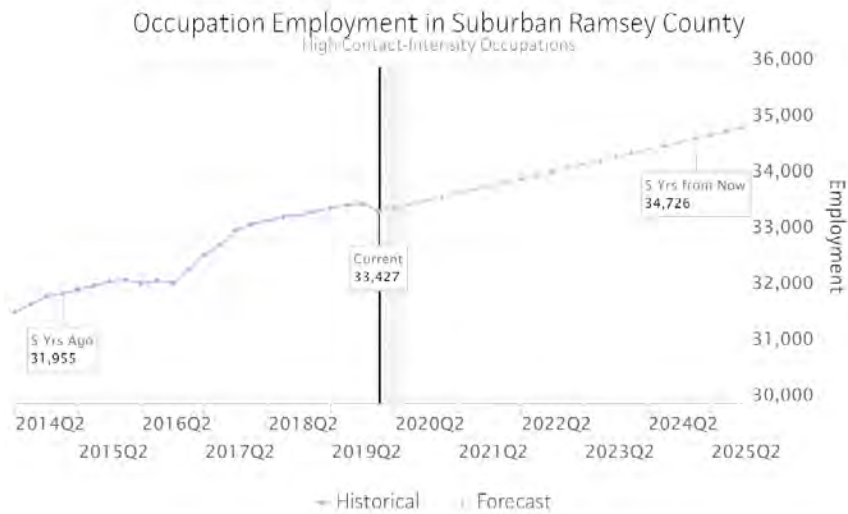
Unemployment Insurance Applicant Demographics from March 16 - July 25, 2020 in Ramsey County and St. Paul, With Suburban Ramsey County Employment in High Contact-Intensity Occupations

	Ramsey County		Suburban Ramsey County	
	Ramsey County Workers Filing for Unemployment between March 15 and July 25, 2020	Percent of Total in Ramsey County Filing for Unemployment	Share of 2020Q1 Workers in Suburban Ramsey County	Employment in High Contact-Intensity Occupations on Suburban Ramsey County**
Age Group				
65+	4,602	5.10%	5.6%	5.5%
55-64	11,603	12.90%	19.1%	17.7%
45-54	13,117	14.60%	20.1%	18.5%
35-44	18,656	20.80%	19.0%	18.1%
25-34	26,620	29.60%	23.0%	23.1%
20-24	12,682	14.10%	8.9%	10.7%
16-19	2,639	2.90%	4.2%	6.5%
Education Level				
Advanced	6,224	6.9%	16.0%	16.7%
4-year degree	17,608	19.6%	30.5%	26.2%
2-year degree	7,513	8.4%	10.3%	12.6%
Some college	23,239	25.8%	17.2%	18.3%
HS	28,689	31.9%	19.3%	19.7%
Less than HS	6,646	7.4%	6.6%	6.4%
Gender				
Female	46,363	51.60%	50.0%	68.0%
Male	43,555	48.40%	50.0%	32.0%
Race and Ethnicity*				
Choose not to answer	N/A	N/A		
More than one race	N/A	N/A	2.4%	2.5%
Native Hawaiian or Pacific Islander	N/A	N/A	0.1%	0.1%
American Indian Alaska Native	595	0.70%	0.5%	0.5%
Hispanic	45,825	6.70%	5.0%	4.3%
Asian	13,295	14.80%	10.7%	11.0%
Black	16,436	18.30%	7.1%	9.3%
Non-Hispanic White	45,825	51%	79.3%	76.5%
Total UI Applications	89,919			

*Individuals could select more than one race or ethnicity. Worker demographic data based on local QWI data by zip code modeled by JobsEQ to 2020Q1 and represents employment by place of residence.

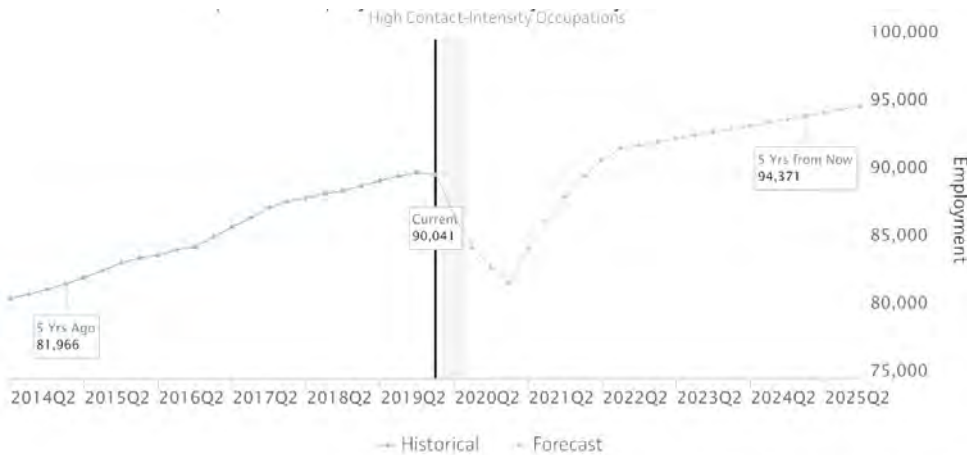
Overall, impacts of COVID-19 have been expected to be sharp and short, with an eventual return to the forecasted trends anticipated prior to the impact of the virus. Across Ramsey County, it is anticipated that from the 90,041 people employed locally in high contact-intensity roles during the fourth quarter of 2020 will see a dramatic drop to just 81,982 by the first quarter of 2021, and then gradually rise through the third quarter of 2022 to return to a similar annual growth rate for these positions that was anticipated prior to the pandemic. These occupations listed in the table above were forecast to grow across Ramsey County by 0.2% annually over the next five years but will likely only grow by about 0.1% due to the impacts of COVID-19. Specific statistics to local occupational impacts of COVID-19 are not possible to compute at zip code levels, but a slight estimated drop from 0.8% annual growth over five years to about 0.7% growth overall in these high contact-intensity positions is a reasonable estimated impact based on industry and occupation mix of Suburban Ramsey County.

Baseline High Contact-Intensity Occupation Employment 5-Year Forecast in Suburban Ramsey County



Source: JobsEQ®, Data as of 2020Q1. The shaded areas of the graph represent national recessions.

COVID-19-Impacted High Contact-Intensity Occupation Employment 5-Year Forecast in Ramsey County

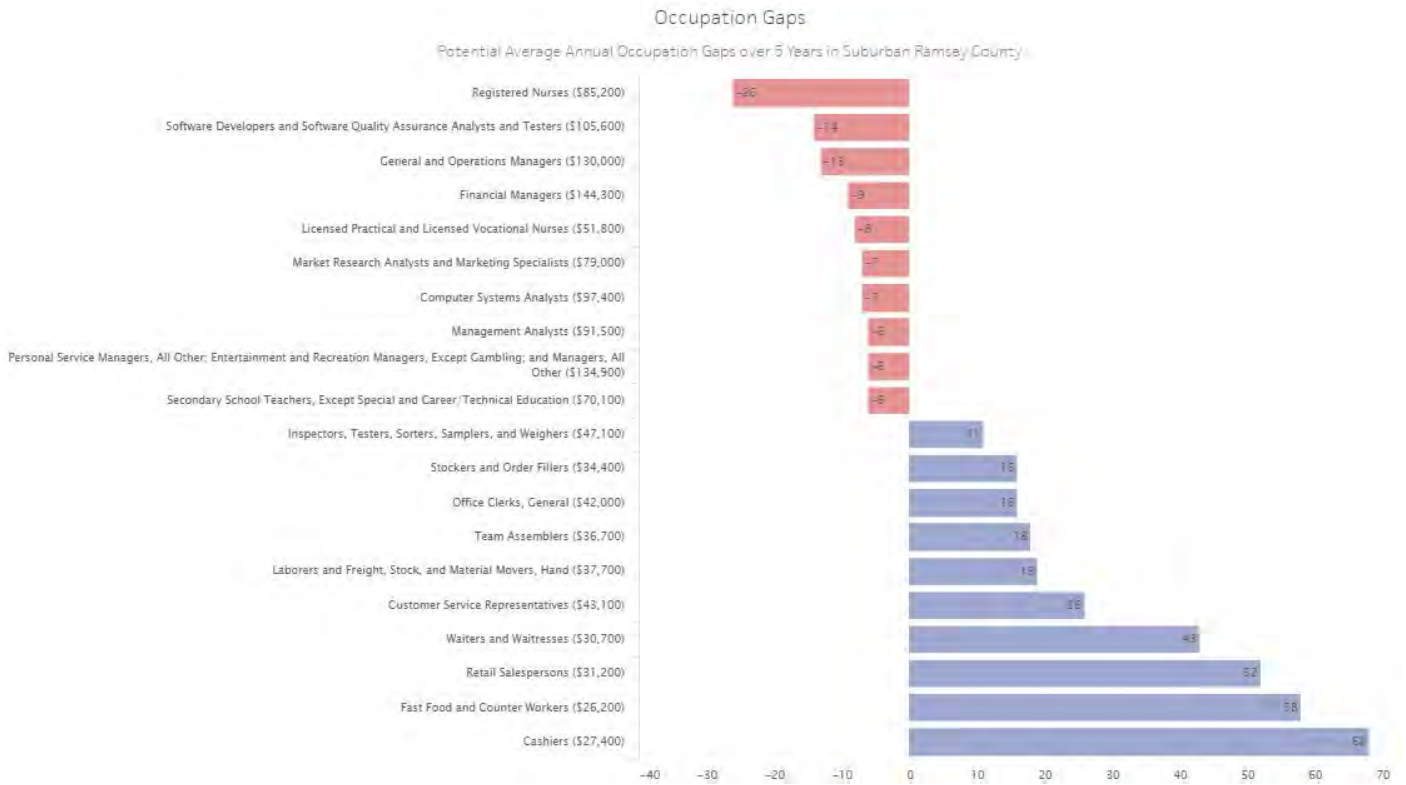


Source: JobsEQ®, Data as of 2020Q1. The shaded areas of the graph represent national recessions.

Mid-Term Occupational Impacts

Estimation of mid-term and long-term recovery of critical local occupations is based on our most reasonable hypothesis given current conditions. In Suburban Ramsey County, an analysis of local labor market occupational gaps as of the first quarter of 2020 showed that there was a shortage of local Nurses, Software Developers, Managers, Financial Managers, Market Research Analysts, IT workers, and Secondary School Teachers. Based on forecasted growing demand for health, tech, education, and remote work-friendly management positions, these occupations of shortage are likely to rebound and grow in demand as the pandemic subsides, possibly beyond initial forecasts. All of the top ten positions of highest forecasted talent shortage over the next five years pay wages of \$50,000 per year, and require an Associate’s Degree or higher.

Conversely, the ten positions forecast to have the highest surplus of talent as of the first quarter of 2020 all require less than a high school diploma on average and pay under \$47,000 per year. Eight out of ten of these positions typically cannot be done remotely, and five out of ten of these positions are considered high contact-intensity. Given the impacts of the COVID-19 pandemic on local industry, these occupations of anticipated high talent excess will likely decline in overall local demand and shift dramatically in how work is done on a daily basis.



Shifting Opportunities

An analysis of current opportunities in Suburban Ramsey County reveals that approximately 60% of all jobs offered in the community are non-remote, and just 14% of positions are able to be made fully remote. The remaining positions (26%) may be able to function as partially-remote but will still require in-person activities. Employment is most heavily concentrated in zip codes 55113 and 55112, but it is zip codes 55109, 55127, and the portions of 55038 and 55418 within Ramsey County that have the most positions that cannot be done remotely.

Remote, Partial, and Non-Remote Jobs by Place of Employment, Suburban Ramsey County, 2020Q1

Suburban Ramsey County	55112	55113	55126	55117	55127	55110	55109	55449 (RC)	55038 (RC)	55421 (RC)	55418 (RC)	All of Suburban Ramsey County
Remote	4,545	5,341	3,453	2,467	753	2,132	1,394	653	4	171	4	20,917
Partially-Remote	7,552	9,830	5,188	4,612	1,561	4,567	4,504	995	9	529	9	39,356
Non-Remote	15,182	23,668	8,404	9,220	4,956	12,341	12,523	2,984	32	1,135	29	90,474
All Occupations	27,279	38,838	17,045	16,299	7,270	19,040	18,421	4,633	44	1,835	42	150,746

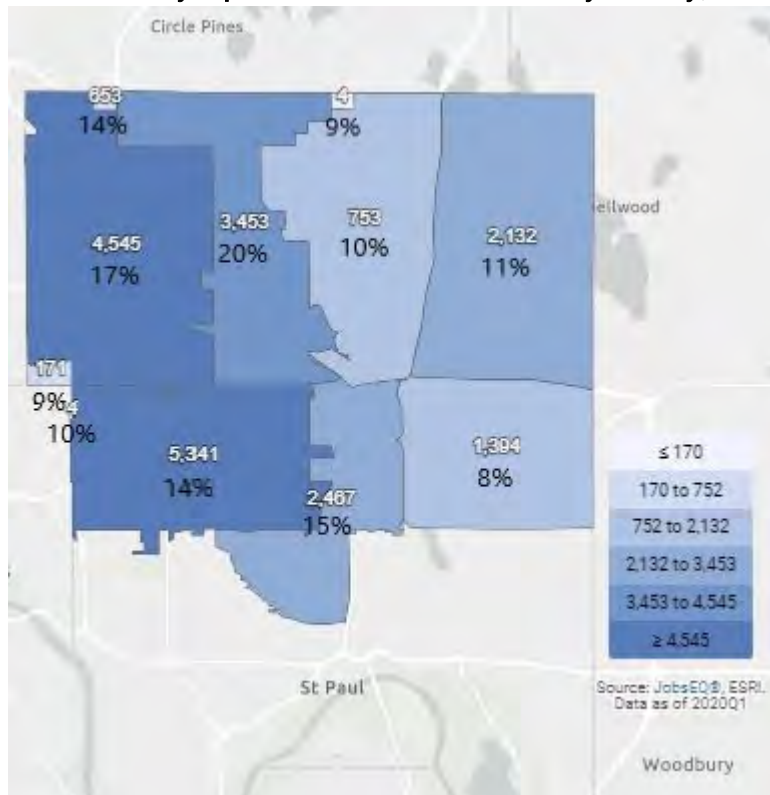
Suburban Ramsey County	55112	55113	55126	55117	55127	55110	55109	55449 (RC)	55038 (RC)	55421 (RC)	55418 (RC)	All of Suburban Ramsey County
Remote	17%	14%	20%	15%	10%	11%	8%	14%	9%	9%	10%	14%
Partially-Remote	28%	25%	30%	28%	21%	24%	24%	21%	20%	29%	21%	26%
Non-Remote	56%	61%	49%	57%	68%	65%	68%	64%	73%	62%	69%	60%
All Occupations	27,279	38,838	17,045	16,299	7,270	19,040	18,421	4,633	44	1,835	42	150,746

Numbers may not sum due to rounding. Worker demographic data based on local QWI data by zip code modeled by JobsEQ to 2020Q1 and represents employment by place of work. Remote, Non-Remote, and Partially-Remote categories identified by Chmura Economics based on ONet.

Remote Work

Across the 150,746 positions in Suburban Ramsey County, 14% are either remote full-time or able to be made fully remote without dramatic changes to the occupational role. Across all zip codes in Suburban Ramsey County, 55126 in the north-central part of the county that includes the town of Shoreview has the greatest share of remote work positions out of the total number of positions employing workers in that zip code (20%). The 55109 zip code, which includes Maplewood and surrounding communities, has the smallest share of total jobs that can be made fully remote (8%).

Remote Work by Zip Code in Suburban Ramsey County, 2020Q1



Analysis of employment by race, ethnicity, and gender reveal that a disproportionately large share of Asian workers living in Suburban Ramsey County are employed in remote work roles, whereas all other race and ethnic groups have a smaller share of local workers in these roles. Black, Hispanic, and people of two or more races are significantly underrepresented in all of the top ten remote-work positions by volume in Suburban Ramsey County. These top ten positions also had a disproportionately high volume of non-Hispanic workers. Bookkeeping, Accounting and Auditing Clerks, Personal Service Managers, and Lawyers also have a disproportionately high share of White workers in Suburban Ramsey County.

All of the top ten remote work positions by volume in this community require some college or higher, with eight out of the ten positions requiring a Bachelor's degree, but little to no prior experience or on-the-job training. Remote work positions in Suburban Ramsey County pay an average annual salary of \$97,700 compared to \$59,800 across all local employment. Overall, remote work positions in Suburban Ramsey County are not forecast to grow over the next five years.

Demographics of Remote Work Talent by Occupation and Place of Residence in Suburban Ramsey County, 2020Q1

SOC	Occupation	Total Empl	White	Black	American Indian	Asian	Pacific Islander	Two or More Races	Non-Hispanic/Latino	Hispanic or Latino (of any race)	Male	Female
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	1,555	52.1%	2.1%	0.1%	44.3%	0.1%	1.2%	98.9%	1.1%	82.4%	17.6%
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1,481	86.2%	3.3%	0.2%	8.9%	0.0%	1.3%	96.9%	3.1%	12.3%	87.7%
13-1198	Project Management Specialists and Business Operations Specialists, All Other	1,349	76.9%	4.4%	0.9%	15.8%	0.0%	1.9%	97.6%	2.4%	44.2%	55.8%
13-2011	Accountants and Auditors	1,275	78.0%	3.5%	0.2%	16.7%	0.0%	1.6%	98.1%	1.9%	40.2%	59.8%
15-1211	Computer Systems Analysts	951	67.1%	3.8%	0.2%	26.6%	0.1%	2.2%	98.2%	1.8%	61.7%	38.3%
11-9198	Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	940	84.6%	3.3%	0.3%	10.3%	0.0%	1.4%	97.7%	2.3%	65.7%	34.3%
13-1111	Management Analysts	898	76.4%	3.1%	0.1%	19.0%	0.0%	1.3%	98.1%	1.9%	59.8%	40.2%
11-3031	Financial Managers	823	80.6%	3.6%	0.2%	13.4%	0.0%	2.2%	97.5%	2.5%	48.4%	51.6%
13-1161	Market Research Analysts and Marketing Specialists	766	81.1%	2.4%	0.0%	15.7%	0.0%	0.8%	98.5%	1.5%	45.4%	54.6%
23-1011	Lawyers	755	87.7%	2.5%	0.1%	8.4%	0.0%	1.3%	98.8%	1.2%	65.5%	34.5%
95-0300	Remote Jobs	19,344	78.7%	3.4%	0.2%	16.0%	0.0%	1.6%	98.0%	2.0%	54.7%	45.3%
00-0000	Total - All Occupations	135,879	79.3%	7.1%	0.5%	10.7%	0.1%	2.4%	95.0%	5.0%	50.0%	50.0%

Note: Employment estimates as of 2020Q1 by place of residence, derived from the Chmura Industry/Occupation Matrix and industry employment data from the Quarterly Census of Employment and Wages (QCEW) provided by the Bureau of Labor Statistics. Top 10 occupations by employment volume.

Wages, Forecast, and Experience Requirements of Remote Work Talent by Occupation and Place of Residence in Suburban Ramsey County, 2020Q1

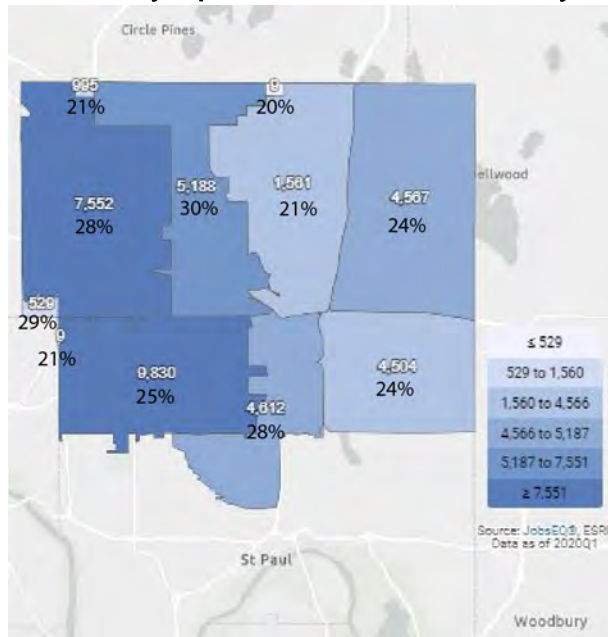
SOC		Avg Ann Wages	Forecast Ann Growth	Typical Entry-Level Education	Previous Work Experience	Typical On-the-Job Training
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	\$105,600	0.3%	Bachelor's degree	None	None
43-3031	Bookkeeping, Accounting, and Auditing Clerks	\$47,800	-1.0%	Some college, no degree	None	Moderate-term on-the-job training
13-1198	Project Management Specialists and Business Operations Specialists, All Other	\$77,400	0.1%	Bachelor's degree	None	None
13-2011	Accountants and Auditors	\$76,000	0.0%	Bachelor's degree	None	None
15-1211	Computer Systems Analysts	\$97,400	0.5%	Bachelor's degree	None	None
11-9198	Personal Service Managers, All Other; Entertainment and Recreation Managers, Except Gambling; and Managers, All Other	\$134,900	0.1%	Bachelor's degree	Less than 5 years	None
13-1111	Management Analysts	\$91,500	0.5%	Bachelor's degree	5 years or more	None
11-3031	Financial Managers	\$144,300	0.9%	Bachelor's degree	None	None
13-1161	Market Research Analysts and Marketing Specialists	\$79,000	1.1%	Bachelor's degree	Less than 5 years	None
23-1011	Lawyers	\$128,600	0.2%	Bachelor's degree	Less than 5 years	None
Remote Jobs		\$97,700	0.0%	n/a	n/a	n/a
Total - All Occupations		\$59,800	-0.1%	n/a	n/a	n/a

Note: Average Annual Wages as of 2019 by the Bureau of Labor Statistics and imputed by Chmura as necessary. Forecast employment growth uses projections from the Bureau of Labor Statistics for 2016-2026, adapted for regional growth patterns by Chmura.

Partially-Remote Work

Of the 150,746 positions employing people in Suburban Ramsey County, 26% can be served at least partially remotely. Across all zip codes in Suburban Ramsey County, 55126 has the greatest share of partially-remote work positions out of the total number of positions employing workers in that zip code (30%), resulting in half of all jobs available in this zip code being for remote or partially-remote jobs. The 55127 zip code, which includes Vadnais Heights and North Oaks, has the smallest share of partially-remote positions of the full zip code areas included in this area (21%).

Partially-Remote Work by Zip Code in Suburban Ramsey County, 2020Q1



Distribution of employment in partially-remote occupations by race, ethnicity, and gender is relatively balanced to overall employment rates, though Non-Hispanic White workers hold a greater share of partially-remote roles in comparison to other racial groups. Overall, just 21.7% of the partially-remote workforce is BIPOC, compared to 25.7% in the workforce overall in Suburban Ramsey County. Women are slightly more likely to hold partially-remote roles than men (59% of partially-remote jobs are held by women in Suburban Ramsey County).

Seven of the top ten partially-remote work positions by volume in this community require just a high school diploma and little or no previous work experience. Partially-remote work positions in Suburban Ramsey County pay on average about \$30,000 less than remote work positions (but around \$8,000 more than the overall average salary), at an average annual salary of \$67,400. Three of the lowest-paying occupations in this group of top ten partially-remote occupations (Personal Care Aides, Office Clerks, and Receptionists and Information Clerks) employ higher-than-average numbers of BIPOC employees. Overall, partially-remote work positions in Suburban Ramsey County are not forecast to grow over the next five years.

Demographics of Partially-Remote Work Talent by Occupation and Place of Residence in Suburban Ramsey County, 2020Q1

SOC	Occupation	Total Empl	White	Black	American Indian	Asian	Pacific Islander	Two or More Races	Non-Hispanic/Latino	Hispanic or Latino (of any race)	Male	Female
31-1122	Personal Care Aides	3,639	65.6%	14.3%	0.9%	16.6%	0.1%	2.5%	93.9%	6.1%	15.0%	85.0%
43-9061	Office Clerks, General	2,542	77.1%	6.5%	0.4%	14.0%	0.1%	1.9%	94.6%	5.4%	18.3%	81.7%
11-1021	General and Operations Managers	2,209	88.5%	3.1%	0.2%	5.6%	0.0%	2.6%	97.1%	2.9%	70.9%	29.1%
43-6014	Secretaries and Administrative Assistants*	1,684	87.5%	4.3%	0.4%	6.0%	0.1%	1.7%	96.8%	3.2%	7.3%	92.7%
41-4012	Sales Representatives, Wholesale and Manufacturing**	1,366	89.8%	2.6%	0.2%	5.8%	0.0%	1.6%	97.5%	2.5%	74.2%	25.8%
43-1011	First-Line Supervisors of Office and Administrative Support Workers	1,099	84.6%	6.5%	0.5%	6.2%	0.1%	2.1%	96.8%	3.2%	33.1%	66.9%
41-3091	Sales Representatives of Services***	951	87.7%	3.4%	0.1%	7.5%	0.0%	1.4%	97.2%	2.8%	71.2%	28.8%
43-4171	Receptionists and Information Clerks	864	81.0%	7.8%	0.5%	7.9%	0.1%	2.8%	94.3%	5.7%	11.4%	88.6%
25-2031	Secondary School Teachers****	794	90.2%	3.2%	0.1%	5.0%	0.0%	1.5%	98.1%	1.9%	45.5%	54.5%
21-1093	Social and Human Service Assistants	692	74.6%	12.7%	1.5%	7.4%	0.1%	3.7%	96.0%	4.0%	22.3%	77.7%
Partially Remote Jobs		38,888	81.7%	6.1%	0.4%	9.7%	0.1%	2.1%	96.6%	3.4%	41.0%	59.0%
Total - All Occupations		135,879	79.3%	7.1%	0.5%	10.7%	0.1%	2.4%	95.0%	5.0%	50.0%	50.0%

Note: Employment estimates as of 2020Q1 by place of residence, derived from the Chmura Industry/Occupation Matrix and industry employment data from the Quarterly Census of Employment and Wages (QCEW) provided by the Bureau of Labor Statistics. *Except Legal, Medical, and Executive **Except Technical and Scientific Products ***Except Advertising, Insurance, Financial Services, and Travel ****Except Special and Career/Technical Education

Wages, Forecast, and Experience Requirements of Partially-Remote Work Talent by Occupation and Place of Residence in Suburban Ramsey County, 2020Q1

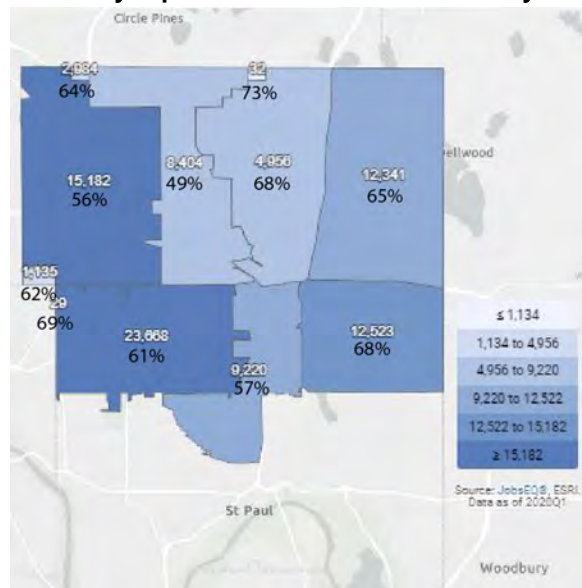
SOC		Avg Ann Wages	Forecast Ann Growth	Typical Entry-Level Education	Previous Work Experience	Typical On-the-Job Training
31-1122	Personal Care Aides	\$28,900	2.3%	High school diploma or equivalent	None	Short-term on-the-job training
43-9061	Office Clerks, General	\$42,000	-0.9%	High school diploma or equivalent	None	Short-term on-the-job training
11-1021	General and Operations Managers	\$130,000	0.0%	Bachelor's degree	5 years or more	None
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	\$43,700	-1.4%	High school diploma or equivalent	None	Moderate-term on-the-job training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$83,200	-0.6%	High school diploma or equivalent	None	Short-term on-the-job training
43-1011	First-Line Supervisors of Office and Administrative Support Workers	\$66,900	-0.7%	High school diploma or equivalent	Less than 5 years	None
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	\$69,200	0.0%	High school diploma or equivalent	None	Moderate-term on-the-job training
43-4171	Receptionists and Information Clerks	\$33,300	0.0%	High school diploma or equivalent	None	Short-term on-the-job training
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$70,100	0.7%	Bachelor's degree	None	None
21-1093	Social and Human Service Assistants	\$38,100	1.2%	Bachelor's degree	None	None
Partially-Remote Jobs		\$67,400	0.0%	n/a	n/a	n/a
Total - All Occupations		\$59,800	-0.1%	n/a	n/a	n/a

Note: Average Annual Wages as of 2019 by the Bureau of Labor Statistics and imputed by Chmura as necessary. Forecast employment growth uses projections from the Bureau of Labor Statistics for 2016-2026, adapted for regional growth patterns by Chmura. *Except Legal, Medical, and Executive **Except Technical and Scientific Products ***Except Advertising, Insurance, Financial Services, and Travel

Non-Remote Work

Nearly two-thirds (60%) of all positions employing workers in Suburban Ramsey County as of 2020Q1 cannot be made remote or partially-remote. Zip codes 55127, 55109, and the Ramsey County portions of 55418 and 55038 have the largest share of non-remote occupations (68-73%). These 90,474 positions across Ramsey County's suburban communities are some of the most vulnerable to pandemic impacts.

Non-Remote Work by Zip Code in Suburban Ramsey County, 2020Q1



Nearly two-thirds (60%) of all positions employing people that work in Suburban Ramsey County are non-remote, and a similar 57% of Suburban Ramsey County residents work in non-remote positions—whether they work in the neighborhood or commute to work outside of the neighborhood they live in. A greater share of Black, African American, Hispanic, and residents of two or more races work in non-remote occupations in Suburban Ramsey County. Overall, 28.3% of the non-remote workforce are from BIPOC communities, compared to 25.7% in all occupations. Male residents account for 53.4% of non-remote employees who live in Suburban Ramsey County, compared to 50% of workers overall. Food service, retail, warehouse labor, customer service, and in-home care positions dominate the top non-remote work positions by employment. All but three positions that are in the top ten by employment among residents of Suburban Ramsey County (Retail Salespersons, Cashiers, and Registered Nurses) employ a disproportionately high volume of Black and African American workers.

Eight of the top ten partially-remote work positions by volume in this community require a high school diploma or less (except for Registered Nurses, which requires either an Associate's or Bachelor's degree, and Truck Drivers which requires a Postsecondary non-degree award) and no previous work experience. These two occupations that command higher education are the only local non-remote careers in the top ten by volume that pay a living wage for a household of three. The one occupation in the top ten employment by volume requiring an Associate's or Bachelor's degree—Registered Nurses—has a high concentration of Asian (13%), multi-racial (4.8%), and Hispanic (6.4%) talent. Non-remote positions in Suburban Ramsey County pay about \$13,000 less than the overall average, with non-remote roles paying average annual salary of \$46,700. Overall, partially-remote work positions in Suburban Ramsey County are forecast to decline by an average of 0.1% annually over the next five years, in line with the overall expected employment growth for residents in the community.

Demographics of Non-Remote Work Talent by Occupation and Place of Residence in Suburban Ramsey County, 2020Q1

SOC	Occupation	Total Empl	White	Black	American Indian	Asian	Pacific Islander	Two or More Races	Non-Hispanic/Latino	Hispanic or Latino (of any race)	Male	Female
41-2031	Retail Salespersons	3,486	83.2%	6.1%	0.4%	7.6%	0.1%	2.6%	95.3%	4.7%	53.3%	46.7%
35-3023	Fast Food and Counter Workers	3,188	75.6%	9.2%	0.7%	10.1%	0.0%	4.4%	94.7%	5.3%	40.0%	60.0%
43-4051	Customer Service Representatives	2,823	78.3%	8.7%	0.5%	8.9%	0.1%	3.6%	95.0%	5.0%	37.4%	62.6%
41-2011	Cashiers	2,733	78.0%	5.8%	0.3%	14.6%	0.1%	1.3%	98.4%	1.6%	11.9%	88.1%
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	2,533	72.7%	9.3%	0.8%	13.0%	0.1%	4.2%	93.4%	6.6%	30.0%	70.0%
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2,236	78.4%	10.8%	0.7%	7.0%	0.1%	3.0%	90.2%	9.8%	63.8%	36.2%
35-3031	Waiters and Waitresses	2,125	79.4%	11.7%	0.5%	5.5%	0.1%	2.8%	93.5%	6.5%	79.2%	20.8%
29-1141	Registered Nurses	1,983	76.1%	5.6%	0.5%	13.0%	0.0%	4.8%	93.6%	6.4%	30.0%	70.0%
53-3032	Heavy and Tractor-Trailer Truck Drivers	1,512	76.1%	9.9%	0.9%	9.4%	0.1%	3.6%	93.7%	6.3%	63.8%	36.2%
53-7065	Stockers and Order Fillers	1,371	80.9%	10.5%	0.7%	5.7%	0.1%	2.1%	94.3%	5.7%	93.6%	6.4%
	Non-Remote Jobs	77,647	78.2%	8.5%	0.6%	9.8%	0.1%	2.8%	93.5%	6.5%	53.4%	46.6%
	Total - All Occupations	135,879	79.3%	7.1%	0.5%	10.7%	0.1%	2.4%	95.0%	5.0%	50.0%	50.0%

Note: Employment estimates as of 2020Q1 by place of residence, derived from the Chmura Industry/Occupation Matrix and industry employment data from the Quarterly Census of Employment and Wages (QCEW) provided by the Bureau of Labor Statistics.

Wages, Forecast, and Experience Requirements of Non-Remote Work Talent by Occupation and Place of Residence in Suburban Ramsey County, 2020Q1

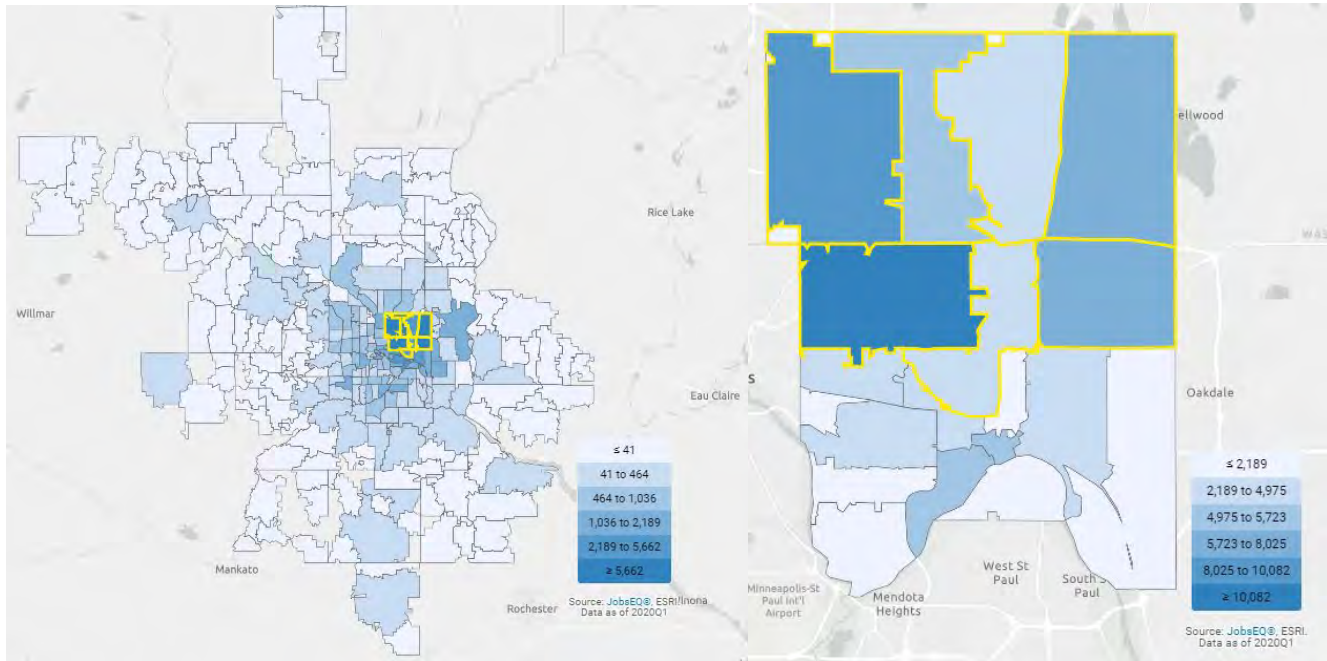
SOC	Occupation	Total Empl	Avg Ann Wages	Forecast Ann Growth	Typical Entry-Level Education	Previous Work Experience	Typical On-the-Job Training
41-2031	Retail Salespersons	3,486	\$31,200	-0.8%	None	None	Short-term on-the-job training
35-3023	Fast Food and Counter Workers	3,188	\$26,200	0.8%	None	None	Short-term on-the-job training
43-4051	Customer Service Representatives	2,823	\$43,100	-0.9%	High school diploma or equivalent	None	Short-term on-the-job training
41-2011	Cashiers	2,733	\$27,400	-0.9%	None	None	Short-term on-the-job training
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	2,533	\$37,700	-0.3%	None	None	Short-term on-the-job training
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	2,236	\$34,000	0.3%	None	None	Short-term on-the-job training
35-3031	Waiters and Waitresses	2,125	\$30,700	0.1%	None	None	Short-term on-the-job training
29-1141	Registered Nurses	1,983	\$85,200	0.7%	Bachelor's degree	None	None
53-3032	Heavy and Tractor-Trailer Truck Drivers	1,512	\$55,300	-0.1%	Postsecondary non-degree award	None	Short-term on-the-job training
53-7065	Stockers and Order Fillers	1,371	\$34,400	-0.7%	High school diploma or equivalent	None	Short-term on-the-job training
Remote Jobs		77,647	\$46,700	-0.1%	n/a	n/a	n/a
Total - All Occupations		135,879	\$59,800	-0.1%	n/a	n/a	n/a

Note: Average Annual Wages as of 2019 by the Bureau of Labor Statistics and imputed by Chmura as necessary. Forecast employment growth uses projections from the Bureau of Labor Statistics for 2016-2026, adapted for regional growth patterns by Chmura.

Commute Shed

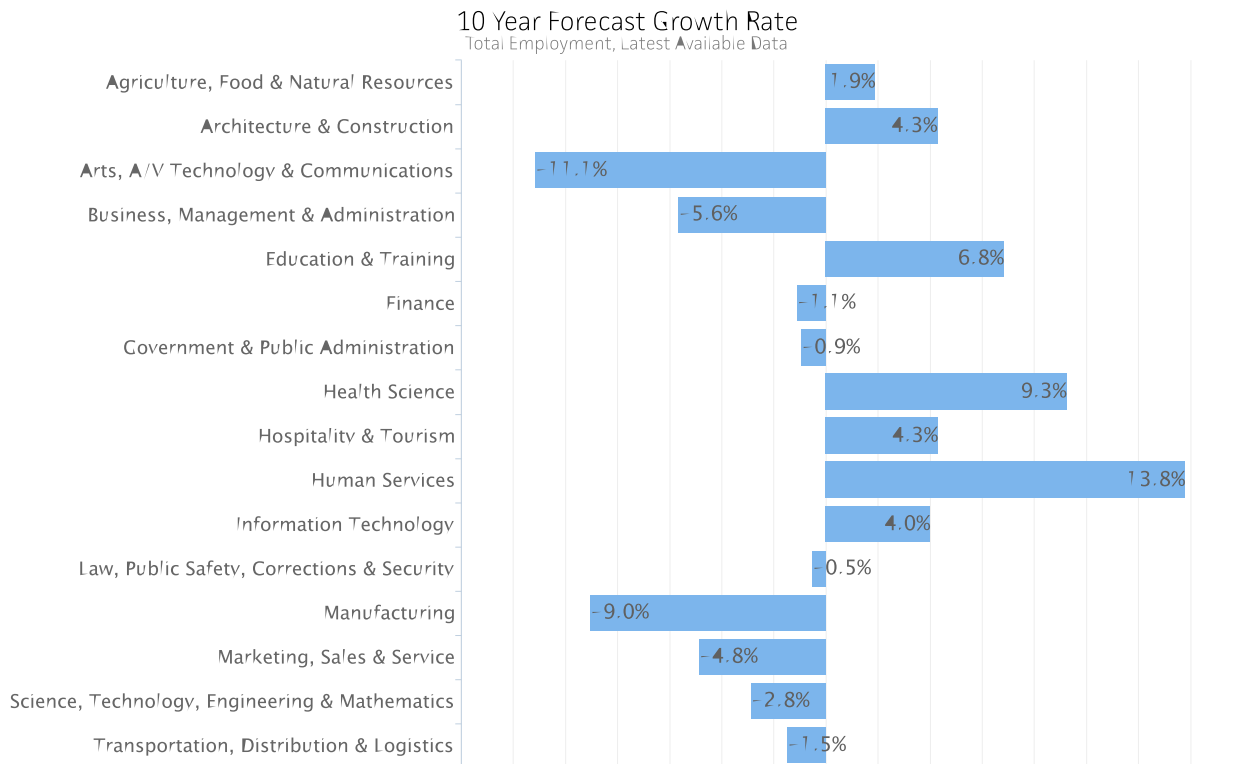
A large share of residents of Suburban Ramsey County work in one of the Ramsey County suburbs. In all, 45,450 residents of Suburban Ramsey County also work in that community, which is about 30% of local residents. Just over 50% of Suburban Ramsey County's resident workforce is employed in Ramsey County. In comparison, of all Ramsey County residents, 55.3% also work in Ramsey County. Just 1.1% of Ramsey County residents work in a state other than Minnesota.

Zip Code of Place of Work for Residents of Suburban Ramsey County



Future Growth by Cluster

Of sixteen career clusters used by Career and Technical Education (CTE), seven are expected to grow and nine are expected to decline over the next ten years. The clusters expecting the greatest growth are Human Services (13.8%), Health Science (9.3%), and Education and Training (6.8%). In contrast, Arts, Audio/Video Technology and Communications (-11.1%) and Manufacturing (-9.0%) are anticipating the greatest declines in overall employment.



Emerging Career Paths

Online job posting data can tell us a lot about employer demand for certain skills, certifications, qualifications, and occupational competencies. There is rich data available by city, county, and even by specific employer. However, it can be challenging to pinpoint exactly which positions advertised would be physically located in a specific geography without a complete address being included in a job post. In this section, we have identified jobs that were advertised as located in one of the fourteen suburban communities specifically identified for this report as Suburban Ramsey County.

In Ramsey County during the first three months of the COVID-19 pandemic,⁷ there were 5,418 new jobs advertised in the suburbs. This volume of new posted positions was a decrease of about 43% of positions specifically indicating these communities in the same three months in 2019. The top three positions advertised by volume—and with the highest growth in job postings from the prior year—included Personal Care Aides, Registered Nurses, and Customer Service Representatives. Other positions trending locally include Cashiers, Insurance Sales Agents, and Nursing Assistants.

Top Emerging Occupations in Suburban Ramsey County, March 15-June 15, 2020

1. **Personal Care Aides** (Caregiver, Flexible Home Health Caregiver, Group Home Direct Support Professional, Direct Care Staff)
2. **Registered Nurses** (Wellness Nurse RN, Registered Nurse, Palliative Care Program Nurse, Hospice Clinical Supervisor RN)
3. **Cashiers** (Cashier, Front Store Attendant) - Majority Part-Time
4. **Insurance Sales Agents** (Licensed Medical Insurance Agent, Insurance Sales Representative)

⁷ March 15-June 15, 2020.

5. **Nursing Assistants** (Lead Resident Assistant, Certified Nursing Assistant, Float Pool Nursing Assistant)
6. **Security Guards** (Patrol Officer, Security Professional, Security Flex Professional)
7. **Loan Interviewers and Clerks** (Mortgage Processor, Loan Processor, Loan Originating Processor)

The certifications and technical skills in demand locally match in particular to the entry-level healthcare occupations above, with Direct Support Professional, Certified Practical Nurse, and Certified in Long Term Care appearing in local job postings more than double than they were mentioned locally a full year prior. Soft skills such as dependability, compassion, and flexibility were mentioned in job postings as required competencies for candidates in higher volumes from March 15-June 15, 2020 in comparison to early 2020 or any point in 2019.

Top Emerging Skills in Suburban Ramsey County in Order of Frequency in Job Postings, March 15-June 15, 2020

1. Dependability (+5% from pre-COVID-19)
2. Compassion (+11% from pre-COVID-19)
3. Flexibility (+1% from pre-COVID-19)
4. Nursing (+16% from pre-COVID-19)
5. Administering Medications (+40% from pre-COVID-19)
6. Career Development (+163% from pre-COVID-19)

Accessible Career Pathways

Local Careers for People with an Associate's Degree or Less

Taking a holistic look at high-wage, accessible career opportunities in Suburban Ramsey County reveal a large number of sales, business, manufacturing, and construction opportunities that are 1) uniquely concentrated in this community, 2) have seen high historic employment growth, 3) are trending in job postings since March 2020, and 3) would be able to be done remotely or with low contact-intensity. Very few of these high-opportunity entry-level careers have large numbers of Black, Indigenous, and suburban residents of color working in these roles, indicating a local opportunity to increase diversity in these in-demand pathways.

For example, **Sales Representatives in Wholesale and Manufacturing** are found in Suburban Ramsey County in greater numbers than would typically be expected for a community of this size in Minnesota (38% more, or an LQ of 1.38). Over the next five years, about 868 of these sales positions will need to be filled, primarily due to retirements and job transitions. Only about 12.7% of residents working in these roles are Black, Indigenous, or People of Color, and usually these roles require moderate on-the-job training.

Sales Representatives, Wholesale and Manufacturing

Titles Used: SFDC Architect Sales, Sales Executive, HVAC Sales Rep, Account Manager, Inside Sales Manager

Employers: Medtronic, Land O' Lakes, Deluxe Corporation, TSI Incorporated, Intrepid USA

Bookkeeping, Accounting, and Auditing Clerks

Titles Used: Accounts Payable Specialist, Document Review Specialist, Reimbursement Specialist, Accounting Assistant, Accounts Receivable Assistant

Employers: Robert Half International, Accountemps, Land O' Lakes, United Natural Foods Inc, Creative Financial STaffing

Sales Representatives (Services)

Titles Used: Financial Advisor, Insurance Agent, Outside Insurance Sales Agent

Employers: Assurance, Senior Life Insurance, Deluxe Corporation, SenText, State Farm Insurance Company

Carpenters

Titles Used: Lead Cabinet Technician, Bath Remodel Installer, Frammer, Subcontract Window Installer

Employers: Tradesmen International, Andersen Windows, People Ready, Renewal by Andersen

Inspectors, Testers, Sorters, Samplers, and Weighers

Titles Used: Food QA Associate, Quality Inspector, Juice Production Specialist

Employers: Volt, Manpower, CrossMark, Spectraforce Technologies, Express Employment Professionals

Computer User Support Specialists

Titles Used: Support Center Technician, Professional Services Technician, Service Desk Analyst, Technical User Support Analyst

Employers: Medtronic, Robert Half International, Siemens, Asurion, Deluxe Corporation

Suburban Ramsey County Local High-Opportunity Careers Requiring an Associate's Degree or Less

SOC	Occupation	Current				Historical	5-Year Forecast		Considerations				Education & Experience		
		2020Q1 Empl	High Wage (Avg Ann Wages)*	High Local Concentration (LQ)	Low Historic Unemployment Rate		High Ann % Empl Growth	High Total Demand (Replacing Over 50% of 2020Q1 Empl in 5 Yrs)	Ann % Growth	Able to Be Remote (R)	Low Contact Intensity (L)	Trending in Job Postings Locally During Pandemic (T)	Higher than Local Average BIPOC Employment (over 25.7%)	Typical Entry-Level Education	Previous Work Experience
41-4012	Sales Representatives, Wholesale and Manufacturing**	1,814	\$83,200	1.38	1.4%	-2.4%	868	-0.6%		L		12.7%	High school diploma or equivalent	None	Moderate-term on-the-job training
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1,721	\$47,800	1.09	1.4%	-2.5%	878	-1.0%	R	L		16.9%	Some college, no degree	None	Moderate-term on-the-job training
41-3091	Sales Representatives of Services***	1,159	\$69,200	1.16	3.0%	2.6%	736	0.0%		L		15.1%	High school diploma or equivalent	None	Moderate-term on-the-job training
47-2031	Carpenters	990	\$61,100	1.04	3.7%	-0.4%	525	0.2%		L		23.4%	High school diploma or equivalent	None	Apprenticeship
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	776	\$47,100	1.39	2.4%	2.0%	328	-2.7%		L		22.8%	High school diploma or equivalent	None	Moderate-term on-the-job training
15-1232	Computer User Support Specialists	694	\$57,800	1.09	2.4%	-0.5%	304	0.4%				27.2%	Some college, no degree	None	None
47-2152	Plumbers, Pipefitters, and Steamfitters	675	\$82,900	1.43	2.3%	0.9%	426	1.0%		L		17.9%	High school diploma or equivalent	None	Apprenticeship
51-4041	Machinists	618	\$54,700	1.68	1.5%	-0.5%	292	-0.4%				17.9%	High school diploma or equivalent	None	Long-term on-the-job training
47-2111	Electricians	548	\$75,700	0.78	1.9%	-5.3%	340	0.6%				17.8%	High school diploma or equivalent	None	Apprenticeship
43-6013	Medical Secretaries and Administrative Assistants	531	\$43,900	0.91	1.9%	3.2%	338	1.0%				15.3%	High school diploma or equivalent	None	Moderate-term on-the-job training
Total - All Occupations		150,746	\$59,800	1.00	2.5%	0.1%	85,030	0.0%				25.7%	n/a	n/a	n/a

*Only careers paying an average of \$40,000 or more are included in this table. Occupations paying an average salary higher than the all-occupation average (\$59,800) in the community are highlighted in green. Unemployment rates below 3% are considered low and highlighted in green. Historical annual employment growth rates above 2.4% are considered high and highlighted in green. Forecasted annual employment growth over 0.4% is considered high and highlighted in green. **Except Scientific and Technical Products. ***Except Advertising, Insurance, Financial Services, and Travel.

Local Careers for People with a Bachelor's Degree or Higher

Nearly all of the rising and most promising accessible careers in Suburban Ramsey County that typically require a Bachelor's degree or higher can be done remotely and are low contact-intensity. Many of the in-demand career paths at these higher education levels are in management, education, finance, or information technology fields, which make for well-aligned opportunities for growth from locally-available entry-level opportunities.

For example, **Software Developers and Software Quality Assurance Analysts and Testers** are 41% more concentrated in Suburban Ramsey County than an average community of its size in Minnesota, and historically, local unemployment in these roles has been very low (1.1%). Over the next five years, about 733 of these positions will need to be filled due to job growth (about 0.4% anticipated), retirements, and job transitions. About 48.9% of local Suburban Ramsey County residents working in these roles are Black, Indigenous, or People of Color (primarily Asian). Typically, these roles seek fresh talent with a Bachelor's degree and no prior experience needed.

General and Operations Managers

Titles Used: Assistant General Manager, Operations Manager, District Manager

Employers: FedEx, H&R Block, Raising Canes, Petco, Wells Fargo

Registered Nurses

Titles Used: HealthEast Care System, Fairview Health Services, Intrepid USA, Sunbelt Staffing Solutions, Interim Healthcare

Employers: Home Care Nurse, Plasma Center Nurse, Registered Nurse - LTC, Long-Term Care Nurse

Software Developers and Software Quality Assurance Analysts/Testers

Titles Used: Windows Platform Test Automation, Systems Evaluation R&D Manager, Software and Firmware Manager, Sr. Controls Engineer

Employers: Medtronic, Manpower, TSI Incorporated, 3M Company, NITYO Infotech

Project Management Specialists and Business Operations Specialists (All Other)

Titles Used: Contract Analyst, Pricing Analyst, Contact Center Oversight Assurance Consultant, Business Liaison Consultant, Regulatory Document Control Specialist

Employers: Medtronic, Wells Fargo, Alerus Financial, Accountemps, The Insource Group

Computer Systems Analysts

Titles Used: QM Process Analyst, SAP Implementation Process Analyst, Principal IT Business System Analyst, Sr. IT Business Systems Analyst

Employers: Medtronic, Wells Fargo, Artech Information Systems, SYSTEL, Javen Technologies Inc.

Elementary School Teachers

Titles Used: 1st Grade Teacher, Long-Term Sub, Instructor

Employers: White Bear Lake Public Schools, Northeast metro 916 Intermediate, Mounds View Public Schools, Masterson Staffing Solutions

Suburban Ramsey County Local High-Opportunity Careers Requiring a Bachelor's Degree or Higher

SOC	Occupation	Current				Historical High Ann % Empl Growth	5-Year Forecast		Considerations				Education & Training		
		2020Q1 Empl	High Wage (Avg Ann Wages)*	High Local Concentration (LQ)	Low Historic Unemployment Rate		High Total Demand (Replacing Over 50% of 2020Q1 Empl in 5 Yrs)	Ann % Growth	Able to Be Remote (R)	Low Contact Intensity (L)	Trending in Job Postings Locally During Pandemic (T)	Higher than Local Average BIPOC Employment (over 25.7%)	Typical Entry- Level Education	Previous Work Experience	Typical On-the- Job Training
11-1021	General and Operations Managers	2,581	\$130,000	1.11	1.3%	2.1%	1,121	0.0%		L		14.4%	Bachelor's degree	5 years or more	None
29-1141	Registered Nurses	2,187	\$85,200	0.75	0.9%	0.9%	691	0.7%			T	23.6%	Bachelor's degree	None	None
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	1,946	\$105,600	1.41	1.1%	0.2%	733	0.4%	R	L		48.9%	Bachelor's degree	None	None
13-1198	Project Management Specialists and Business Operations Specialists, Other	1,381	\$77,400	1.12	2.2%	1.1%	675	0.1%	R	L		25.5%	Bachelor's degree	None	None
15-1211	Computer Systems Analysts	1,030	\$97,400	1.77	1.1%	-1.0%	402	0.5%	R	L		34.7%	Bachelor's degree	None	None
11-9198	Personal Service Managers, All Other; Entertainment and Recreation Managers**	1,008	\$134,900	1.00	1.1%	1.4%	381	0.1%	R	L		17.7%	Bachelor's degree	Less than 5 years	None
25-2021	Elementary School Teachers, Except Special Education	958	\$69,500	0.73	1.8%	-0.6%	395	0.6%				12.5%	Bachelor's degree	None	None
11-3031	Financial Managers	887	\$144,300	1.37	1.0%	1.8%	395	0.9%	R	L		21.9%	Bachelor's degree	5 years or more	None
13-1161	Market Research Analysts and Marketing Specialists	848	\$79,000	1.26	2.1%	4.9%	503	1.1%	R	L		20.4%	Bachelor's degree	None	None
13-1111	Management Analysts	828	\$91,500	1.00	2.3%	0.5%	420	0.5%	R	L		25.4%	Bachelor's degree	Less than 5 years	None
Total - All Occupations		150,746	\$59,800	1.00	2.5%	0.1%	85,030	0.0%				25.7%	n/a	n/a	n/a

*Only careers paying an average of \$40,000 or more are included in this table. Occupations paying an average salary higher than the all-occupation average (\$59,800) in the community are highlighted in green. Unemployment rates below 3% are considered low and highlighted in green. Historical annual employment growth rates above 2.4% are considered high and highlighted in green. Forecasted annual employment growth over 0.4% is considered high and highlighted in green. **Except Gambling; and Managers, All Other.

Retooling and Reimagining Work

The following section highlights the critical skills in demand in Suburban Ramsey County, as identified by employers in jobs advertised online in the community. This section's data is based on the content found in jobs newly posted online by employers located within Ramsey County and outside the St. Paul city limits. This list is not a complete or representative list of job opportunities in the region but is offered as a sampling of jobs advertised.⁸ In some cases, these employers located in Suburban Ramsey County may be hiring for positions in other parts of the county.

In Suburban Ramsey County, 405 identified employers advertised 4,512 jobs locally between March 16 and July 31, 2020. The employers who advertised jobs within Ramsey County and outside of the City of St. Paul that explicitly included a location in the suburban area may not have a physical location in the community (i.e., a staffing agency or chain headquartered elsewhere but recruiting in that specific zip code). The next two sections highlight the foundational skills in demand among local employers, and the skill transferability opportunities of the local talent supply.

Foundational Skills

Much research has gone into determining what skills are considered essential in the emerging digital economy. According to a report published by Burning Glass Technologies and the Business Higher Education Forum in late 2019 titled "The New Foundational Skills of The Digital Economy: Developing the Professionals of the Future" classified 14 essential skills aligning to three categories: Human Skills, Business Enablers, and Digital Building Blocks.⁹ This research found that all three categories of New Foundational Skills are essential across every industry and job type, and that all of these skills are able to be developed through training and education.

In addition, positions that require at least one of the New Foundational Skills pay more on average. Nationwide, jobs requesting at least one of the New Foundational Skills advertised an average salary of \$61,000, which is \$8,000 higher than other jobs that do not require any of these foundational skills. Each of the skills in the Digital Building Block and Business Enabler skill groups include a further salary premium from 7% to 38% higher than the overall average. By developing a range of New Foundational Skills, this study found that job-seekers could increase their earning power and productivity by growing their abilities in all three skill areas. Burning Glass Technologies estimates that fewer than one in five job-seekers they analyzed had some skills developed in each of the three areas. To further clarify within the Business Enablers group, we have added a 15th Foundational Skill called "Digital Skills," which includes social media, search engine marketing, web analytics, content marketing, email, mobile campaigns, strategy and planning, social selling, video production, and similar related skillsets. For a full list of the New Foundational Skills, see below.

⁹ Burning Glass Technologies, BHEF. 2019. The New Foundational Skills of the Digital Economy: Developing the Professionals of the Future." Accessed 7/30/2020 at https://www.burning-glass.com/wp-content/uploads/New_Foundational_Skills.pdf

Defining the New Foundational Skills

High-Demand Human Skills

Analytical Skills - Analyze information, problem solve, and make decisions - detect patterns, brainstorming, observing, interpreting data, integrating new information, theorizing, and making decisions based on multiple factors.

Collaboration—Open communication, reaching consensus, giving credit, identifying obstacles and addressing problems cooperatively, focus on group goals. Examples, resilience and respect for diversity.

Critical Thinking— Refers to evaluating information and then making a decision based on your findings. Examples: Process management, ongoing improvement, auditing, benchmarking, big data analytics, business intelligence, calculating, case analysis, causal relationships, classifying, computing, decision making, diagnostics, recording keeping, evaluating, prioritization, troubleshooting, attention to detail.

Creativity - Could include ability to spot trends, come up with innovative solutions, solve for big problems. Examples: Budgeting, brainstorming, optimization, predictive modeling, problem-solving, restructuring, strategic planning, integration.

Communication - Explain information orally in a meeting or presentation. Write a memo, email, or report. Examples: Active listening, reporting, surveying, teamwork, oral communication, written communication, presenting.

High-Demand Business Enabler Skills

Analyzing Data - Examples include SQL, Microsoft excel, critical thinking, R or Python, Data Visualization, Presentation skills and Machine learning, data cleaning, data preparation.

Managing Data - Data mining, data assessments, data validation, data security, data transference, SQL, Workflow Optimization, Information systems, and market analysis, databases.

Software Development—Examples mathematical aptitude, problem solving, programming languages (Python, React, Angular, Docker, CompTIA, Amazon AWS), time management, writing and testing code, Machine learning, Source Control, Operating systems.

Computer Programming—examples include programming languages, write computer programs, update computer programs, troubleshoot programs, test software programs, collaborate with other programmers, mathematical skills, problem-solving, inquisitiveness, Java, C++.

Digital Security and Privacy—examples security engineering, encryption, intrusion detection, breach response, firewall development, vulnerability analysis, penetration testing, security information and event management, cybersecurity, HTTPs, SSL, and TLS, Endpoint threat detection and data loss prevention.

High-Demand Digital Building Block Skills

Business Process—Operational procedures, ensure compliance, process improvements, business requirements, customer service, analysis techniques - Agile Business Analysis, Six Sigma, Business Process Modeling Notation (BPMN), and Rational Unified Process.

Project Management—Organization, negotiation, team management, time management, risk management, problem-solving, budget management, motivation, technical writing, adaptability, tech savvy, reporting skills, active listening, research skills, interpersonal skills, project management methodologies, policy knowledge, conflict management.

Digital Skills - social media, search engine marketing, analytics, content marketing, email, mobile campaigns, strategy and planning, social selling, pay per click marketing, Video production.

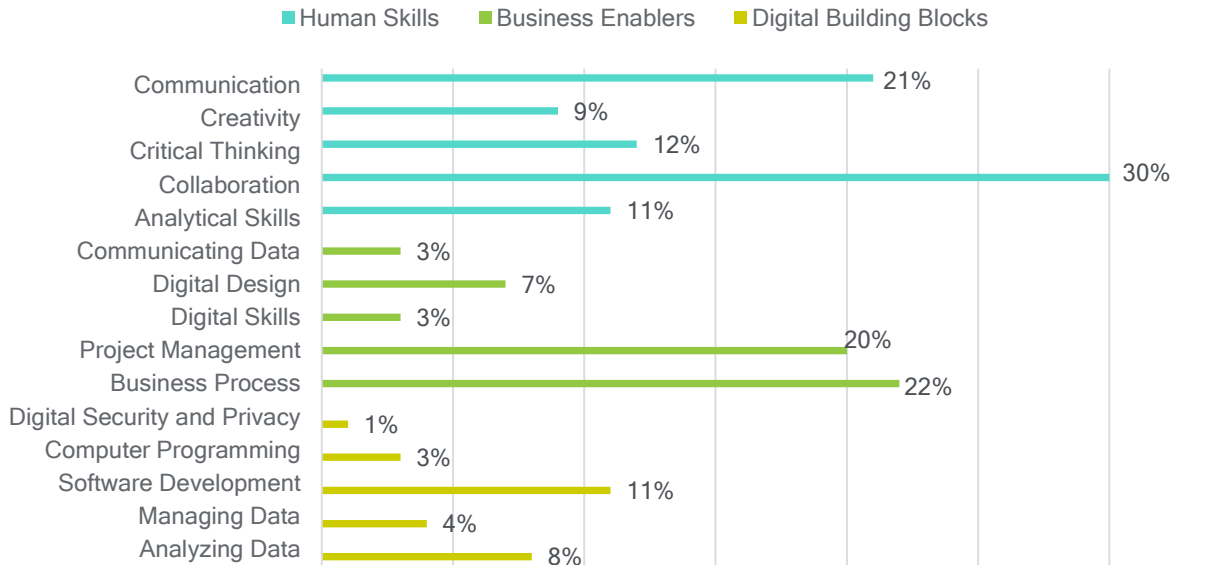
Digital Design - Typography, Adobe creative suite, interactive media, coding, branding, wireframing, layout and navigation principles, HTML/CSS, design thinking approaches, UX/UI.

Communicating Data—Data visualization, storytelling, writing and publishing skills, data visualization.

In Suburban Ramsey County, Human Skills like Collaboration and Communication, and Business Enablers like Business Process and Project Management appear in highest volumes as required skills

for local jobs. Digital Building Blocks such as Managing Data, Computer Programming, and Digital Security and Privacy appear in lower volumes in this community.

Suburban Ramsey County Foundational Skills for the Digital Economy



	Suburban Ramsey County
Communication	21%
Creativity	9%
Critical Thinking	12%
Collaboration	30%
Analytical Skills	11%
Communicating Data	3%
Digital Design	7%
Digital Skills	3%
Project Management	20%
Business Process	22%
Digital Security and Privacy	1%
Computer Programming	3%
Software Development	11%
Managing Data	4%
Analyzing Data	8%

Jobs posted by employers in Suburban Ramsey County between March 16 and July 31, 2020, showed demand comparable to in-demand skills across Ramsey County. Only 16% of the 100 top skills mentioned as “required” in new job ads posted during this four-and-a-half-month period were specific to employers in Suburban Ramsey County. 8 of the 16 skills unique to jobs posted by employers in Suburban Ramsey County were related to caregiving positions, such as Home Health Aides. There was also a difference in the frequency of the skills within postings in Suburban Ramsey County compared to Ramsey County as a whole. The blue text below indicates skills required in positions advertised by employers located in Suburban Ramsey County that are not in the top four required skills in each category across Ramsey County overall.

High-Demand Human Skills	High-Demand Digital Building Block Skills	High-Demand Business Enabler Skills
Analytical Skills 1) Medications 2) Monitoring 3) Analysis 4) Problem Solving Collaboration 1) Dedication 2) Collaboration 3) Leadership 4) Relationships Critical Thinking 1) Scheduling 2) Compliance 3) Problem solving 4) Evaluation Creativity 1) Innovation 2) Passion 3) Design 4) Testing Communication 1) Communication 2) Customer Service 3) Relationships 4) Supervision	Analyzing Data 1) Monitoring 2) Analysis 3) Evaluation 4) Detail-oriented Managing Data 1) Detail-oriented 2) Management Skills 3) Research 4) Distribution Software Development 1) Flexibility 2) Design 3) Independent Work 4) Problem solving Computer Programming 1) Engineering 2) Multitasking 3) Mathematics 4) Troubleshooting Digital Security and Privacy 1) Security 2) Confidentiality	Business Process 1) Scheduling 2) Customer Service 3) Operations 4) Planning Project Management 1) Collaboration 2) Leadership 3) Supervision 4) Coordination Digital Skills 1) Marketing 2) Research 3) Integrations 4) Influencing Digital Design 1) Design 2) Testing 3) Implementing 4) Engineering Communicating Data 1) Writing 2) Written Communications 3) Presentation skills

Skill Transferability

When advising individuals who have recently lost their jobs or are facing work instability, identifying jobs that the individual would be willing to take (meaning that it pays equally well or better than their prior role) and able to take (meaning they possess the skill set and educational background necessary for success). To simplify this search process, we can use a “willing and able” matrix, which utilizes skill competencies outlined in O*NET and estimated local future talent supply gaps to allow us to create meaningful career and education decisions.

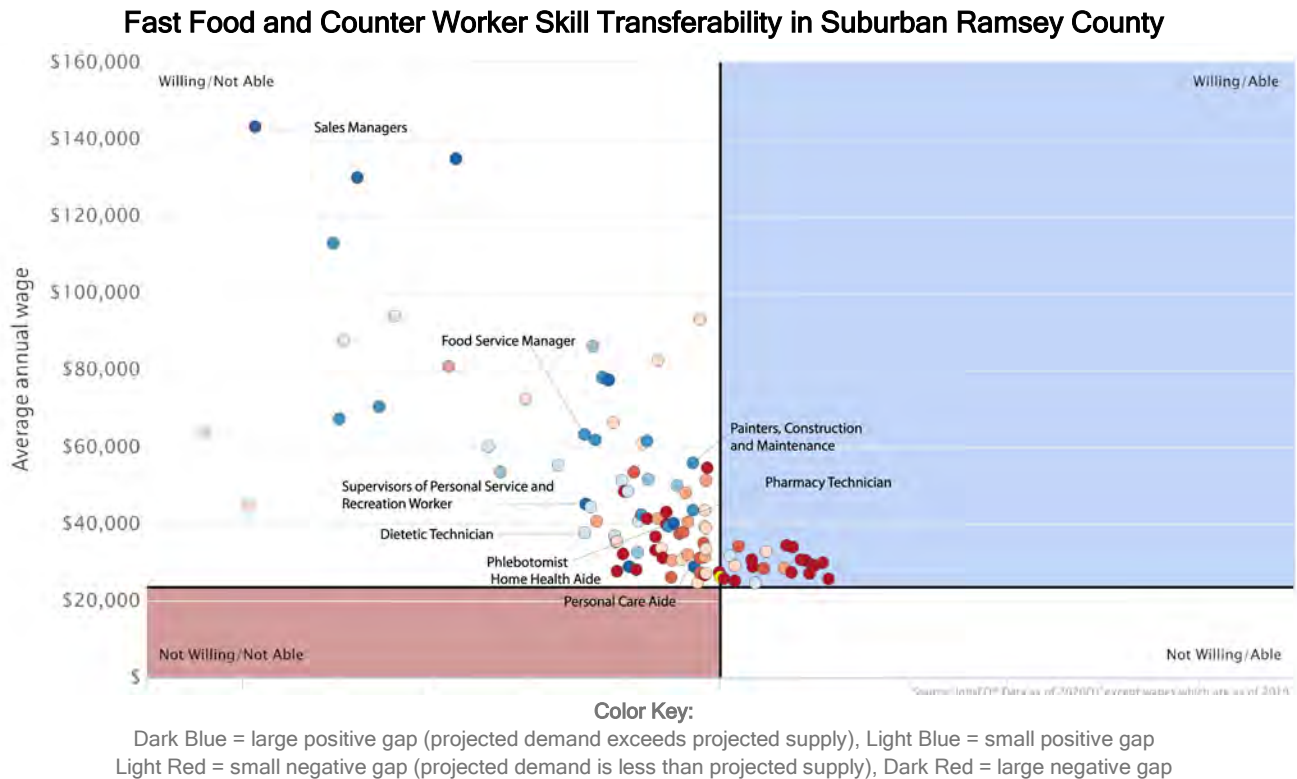
The occupations below are all found in high volumes in Suburban Ramsey County, are anticipated to have a local surplus of talent over the next five years, and experienced high unemployment applications across Ramsey County since the beginning of the pandemic.

Fast Food and Counter Workers

There are a limited number of occupations available locally in Suburban Ramsey County that an individual who had previously worked as a Fast Food or Counter Worker, and those jobs that are available and related in skill sets (Dishwashers, Food Servers, Waiters and Waitresses) are anticipated to have excess talent in future years, be slow to recover from COVID- 19 impacts, and pay similar low wages.

In contrast, by gaining a few industry skills or certifications, a Fast Food or Counter Worker could leverage customer service skills, attention to detail, money handling, and safe food handling to enter

into a career in a growing field such as a Pharmacy Technician, Phlebotomist, Personal Care Aide, Home Health Aide, Dietary Aide, or Dietetic Technician. There are also some similar entry-level skills related to Cargo and Freight Agents, Barbers, and Cleaning Staff Supervisor roles that would require a different set of retraining skillsets. Reskilling to become a Sales Manager may be appealing based on some overlapping skillsets and the high annual wage offered, but for many of these roles, a Bachelor's degree may be required. The willing and able matrix for Waiters, Waitresses and other Food Service Workers in Suburban Ramsey County looks similar to the chart shown below.



Computer User Support Specialists

Computer User Support Specialists provide technical assistants to people on computers or other electronic devices. They typically answer questions or resolve computer problems for clients in person, via telephone, or electronically. They may provide assistance with software, hardware, or other components of equipment. Most occupations that value similar skillsets are in Information Technology and require some reskilling or additional education to access. Positions anticipating some shortages in Suburban Ramsey County over the next five years include Computer Network Support Specialists, Network Administrators, and Other Computer Occupations. Interestingly, positions like Insurance Appraisers (Auto Damage), Security and Fire Alarm System Installers, and Librarians and Media Collections Specialists are also anticipating shortages and share skill sets related to Computer User Support Specialists, such as customer service, technical support, and troubleshooting.

Computer User Support Specialist Skill Transferability in Suburban Ramsey County

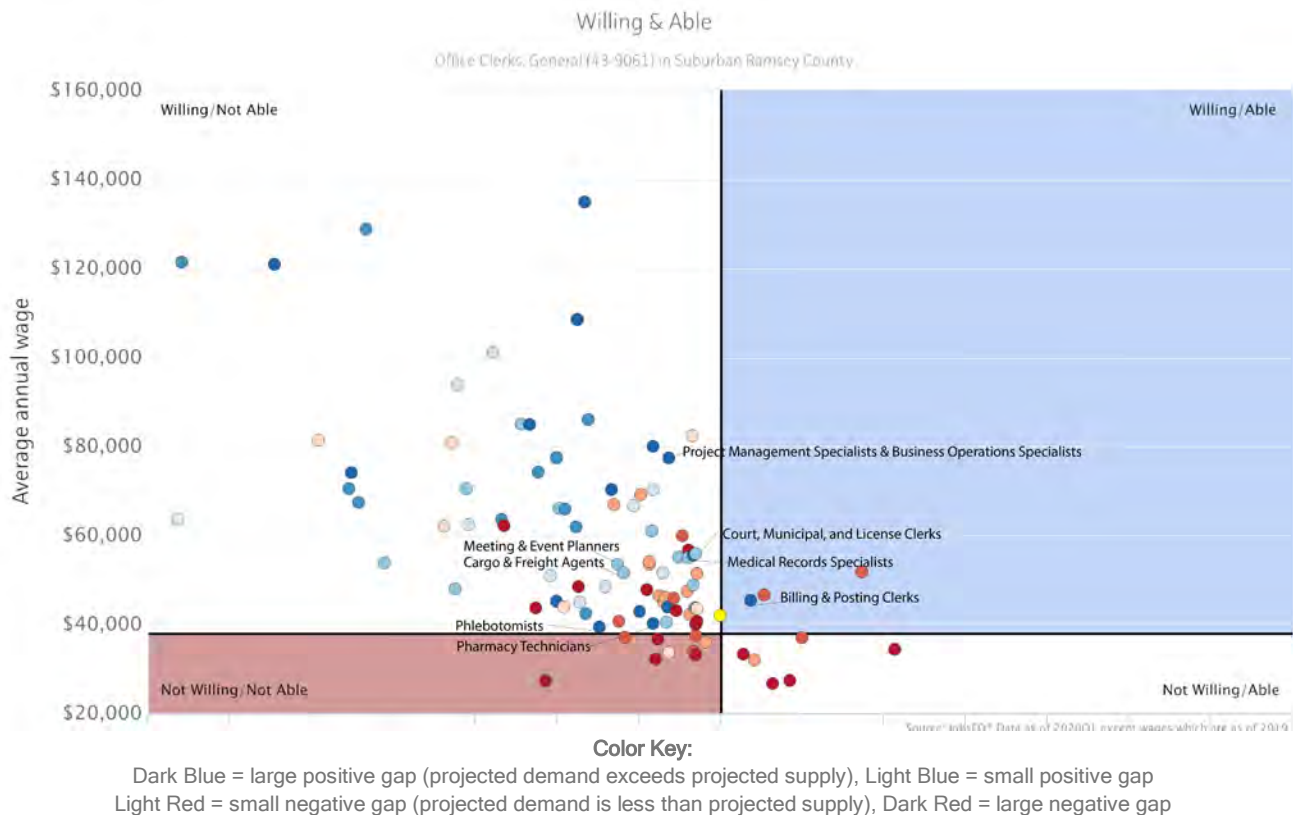


Office Clerks, General

Demand for General Office Clerks is forecasted to decline over the next five years locally, and the first three months of the pandemic showed a 53% decline in job postings in Suburban Ramsey County compared to pre-COVID volumes. General Office Clerks do varied and diverse activities depending on the industry in which they are employed, but typically must have knowledge of office systems and procedures, answer telephones, do bookkeeping, filing, and typing for their place of employment.

While positions like Bill and Account Collectors, Order Clerks, and Customer Service Representatives are close in skillset and do anticipate some short-term demand in this community, a talent oversupply is likely for these occupations. The best career option based on forecasted local talent needs and anticipated talent shortage would be Billing and Posting Clerks, a position for which a typical General Office Clerk would have most of the necessary skills for success and would likely result in a wage increase. Other occupations that are anticipating shortages in Suburban Ramsey County that could be accessible with some reskilling or reeducation include Pharmacy Technicians, Phlebotomists, Cargo and Freight Agents, Meeting and Event Planners, Court, Municipal, and License Clerks, and Medical Records Specialists.

Office Clerk Skill Transferability in Suburban Ramsey County



Conclusion

Suburban Ramsey County has a variety of local career opportunities across multiple sectors, with business, finance, education, health, and human services in high demand now and into the future. Rising skills focused on healthcare and soft skill development—signal a rising local demand for personal care services, healthcare, and other human services mirroring the future growth forecasted by career cluster. Education and workforce programming in Suburban Ramsey County may choose to focus on healthcare, education, and human services careers with particular emphasis on reskilling for individuals who may have been recently displaced from work midway through a successful career. Given the older, more highly educated age demographics of these communities overall, and the high expected future shortages of talent in roles that require advanced education, reskilling and reemployment of the displaced workforce is a core strategy for these suburban communities.

This report has highlighted the most critical human skills, digital skills, and business enablers sought in this community, as well as the related skills-based career shifts for individuals in service industries who may have experienced layoffs or are still employed in occupations that are likely to have an excess of talent locally over the next five years. However, it is important to remember that Suburban Ramsey County is not an island and not monolithic; many individuals commute both in and out of this community daily for both work and educational opportunities, and many of the suburbs have unique opportunities and challenges. Positioning these community needs in the broader context of Ramsey County as a whole will ensure that the county is filled with resilient neighborhood economies today and tomorrow.