

## Introduction: Oakland County

#### **About This Report**

The Workforce Intelligence Network for Southeast Michigan (WIN) partnership is a collaboration of six Michigan Works! Agencies (MWAs) and ten community colleges across a 16-county region in Michigan. The counties in the WIN partnership include: Genesee, Hillsdale, Huron, Jackson, Lapeer, Lenawee, Livingston, Macomb, Monroe, Oakland, Saint Clair, Sanilac, Shiawassee, Tuscola, Washtenaw, and Wayne, along with the City of Detroit.

This report highlights labor market information and real-time job posting data for Oakland County with special sections devoted to five occupational groups. WIN's analysis of online job postings, a proxy for employer demand, is a pioneering method for tracking the health of the labor market.

#### Occupation groups include:

- Business and Finance (page 7)
- Health Care (page 12)
- Information Technology IT (page 17)
- Skilled Trades & Technicians -manufacturing focused (page 22)
- Transportation, Distribution, and Logistics TDL (page 27)

#### Data analyzed includes:

- Employer demand
- Top posting jobs
- In-demand credentials, degrees, and skills
- Educational attainment required

- Wages offered in job postings
- Employment
- Unemployment
- Labor force



#### **Key Findings**

1. Online job postings decreased by less than half (0.4%) of a percentage point since Q2 to 42,873.

Postings decreased by only a total of 185. However, since Q3 of 2015 there has been a 3.6% decrease in (1,601) online job postings. Despite this, total online postings remain near record highs, in which five of the last six quarters saw upwards of 40,000 postings.

2. Online postings in TDL occupation group offering more than \$75,000 is greater than the total number of online postings offering salaries of \$35,000 or less.

Roughly 35% of online postings offered more than \$75,000 and 29.5% of postings offered less than \$35,000.

3. Health Care and IT remain the highest in-demand occupational groups.

These two groups are routinely near the top in terms of online job postings. IT postings outpaced Health Care despite the latter doubling the former in employment. Other top posting groups that were not analyzed in this report include Customer Service and Engineers and Designers. See appendix 2 for more information on postings for all occupational groups.

4. Job postings decreased in three of the five occupational groups mentioned in this report.

Skilled Trades, Information Technology, and Business and Finance related positions have declined in the last three consecutive quarters. Meanwhile, Health Care and TDL saw the most pronounced increase in online job postings. Despite waning figures, postings for IT related occupations have remained consistently high. This is a change since Q2 in which only TDL jobs saw online posting increases.

5. The top 50 jobs in Oakland County remain mostly consistent.

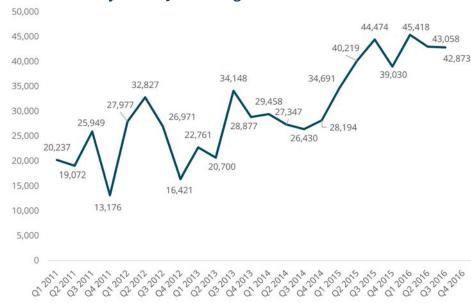
With the exception of three positions that were not previously in the top 50 for Q2 including stock clerks, merchandise displayers, and web developers, the remaining 47 jobs remained in the top 50 with relatively little movement.

## **S** Executive Summary

#### **Postings over time**

After online job postings peaked in Q1 of 2016 declining 5.5% by Q2, the trend continues into negative territory but by less than a percentage decrease (-0.4%), a difference of 185 postings from Q2 to Q3. Year-over-year, total job postings have declined by 3.6%. (-1,601 job postings). Despite the continued downward trend, employer demand in Oakland County remains high relative to previous years- online ads have surpassed 40,000 in five of the last six quarters.

#### **Oakland County Online Job Postings**

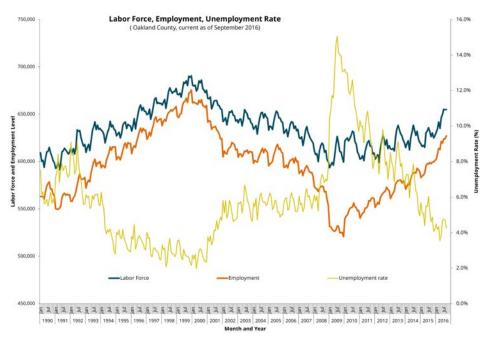


Data: Burning Glass Technologies Analysis: Workforce Intelligence Network

#### Labor force/employment/unemployment

The labor force in Oakland County increased by 11,279 individuals (+1.8%) to 654,883 in Q3 2016. This is the most aggressive rate of growth and total number of individuals employed over the course of 2016 in a single quarter. Year-over-year, there has been a 3.7% increase (+23,611 individuals) in the overall labor force. The employment rate increased steadily by 1.2% from the Q2 (+7,214). Since the previous year, there has been a 4.5% increase in employment (+26,923 individuals) to 624,867 individuals. Alternatively, the unemployment rate increased by 0.6% since Q2 2016, despite the steady decreases in the previous two quarters. In real terms, unemployment, increased by 4,065 individuals to 30,016 (%15.7) from the last quarter. However, as of Q3 2015, the total unemployment has declined by 9.9% (-3,312 individuals).

#### Labor Force, Employment, Unemployment Rate







# The top five jobs of 2016 remain reliably in demand.

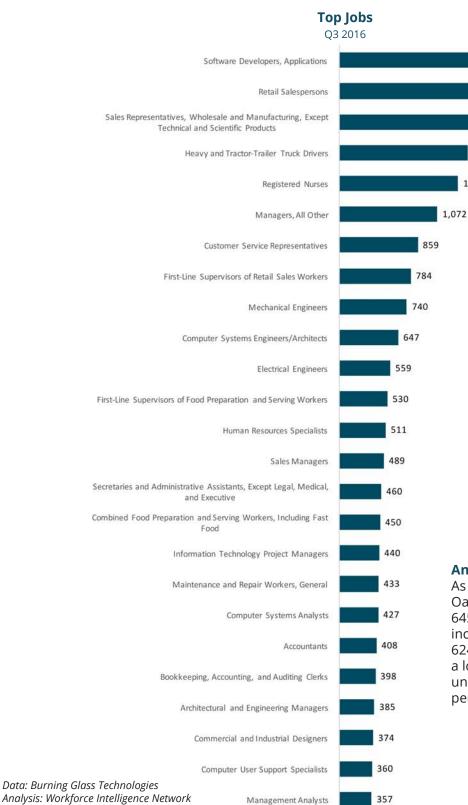
## Current Unemployment Rate: 4.3% from 4.7% in Q2

1,950

1,595

1,536

1,297



#### **Analysis**

As of September 2016, the labor force in Oakland County increased by 1.75% to 645,883 in Q3. Employment also increased at a faster rate (+1.2%) to 624,867. While employment increased at a lower rate than the labor force, the unemployment rate dropped by 0.6 percentage points to 4.0%.

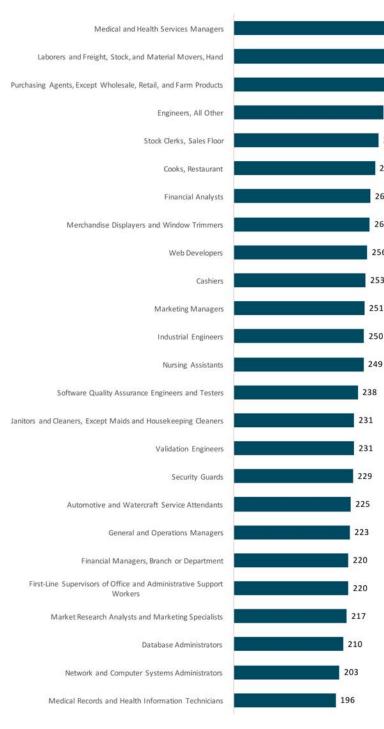


## Employer Demand relatively flat (185 fewer job postings or 0.4%).



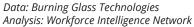
287

#### **Top Jobs** Q3 2016



#### **Analysis**

Labor force and employment levels in Oakland County risen past pre-recession highs and have begun to reach levels not seen since the early 2000's.





## Business & Finance

#### Introduction

Jobs in the business and finance occupation group can be found in nearly every type of business and industry. These workers need strong mathematical and accounting abilities along with project management and planning skills. Workers in this occupation group are in high demand in southeast Michigan.

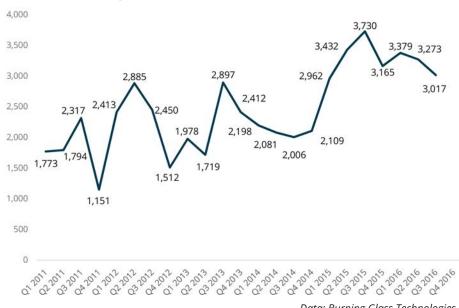
#### **Job Posting Analysis**

Online job postings for occupations related to business and finance fell by 106 jobs from 3,273 in the second quarter of 2016 to 3,017 jobs in Q3, a 7.8% decline. Compared to third quarter one year ago in which there were 3,432 online postings for business and finance occupations, there has been a 12% drop, a 415 online posting reduction.

#### **Employment Analysis**

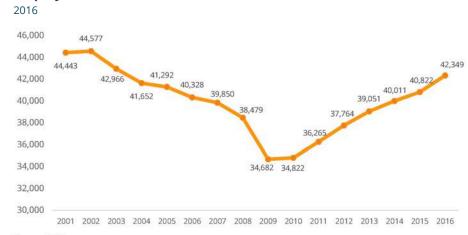
Employment of Business and Finance workers increased to 42,300 workers (+3.7%) thus far in 2016. This occupation group has now surpassed 2004 levels of employment. The increasing demand for these workers should lead to steady employment growth in years to come—2016 marks the seventh consecutive year of increased employment for this group.

#### **Online Job Postings**



Data: Burning Glass Technologies Analysis: Workforce Intelligence Network

#### **Employment Over Time**



Source: EMSI Analysis: Workforce Intelligence Network





## 1,500 newly employed individuals

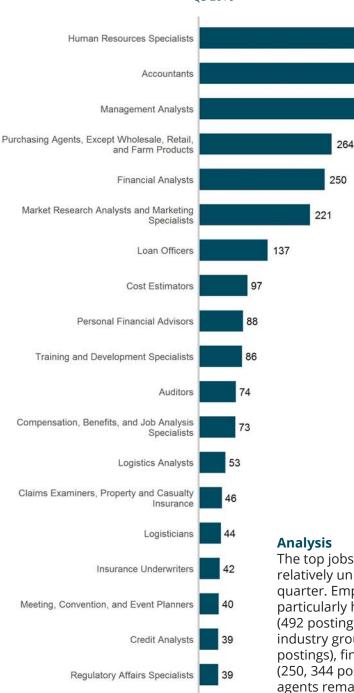


## Most in-demand job: human resource specialists

344

### **Business & Finance Top Jobs**

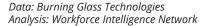
Q3 2016



Wholesale and Retail Buyers, Except Farm

38

The top jobs in Oakland County remained relatively uniform compared to the previous quarter. Employer demand remained particularly high for human resource specialists (492 postings). Other top positions within the industry group include accountants (369 postings), financial and management analysts (250, 344 postings respectively), and purchasing agents remained in high-demand despite the nominal reduction in job postings for each of these positions overall.







## Bachelor's degree most desired

## 10% increase in employer demand

#### Business & Finance Educational Attainment Required

Within the field of business and finance, employers overwhelmingly desired at least a bachelor's degree, that is 82% for the field overall or 1,851 of the total available job postings. However, the emphasis on job postings requiring bachelor's degrees is down roughly 4.7% from the previous quarter.

At the same time, more jobs desiring only a high-school, vocational training or an associate's degree grew but only slightly by between 20 and 30 additional job postings for each of those levels of education. Similarly, job postings requiring graduate or professional degrees decreased by approximately half from 55 postings in Q2 to 26 postings in Q3.

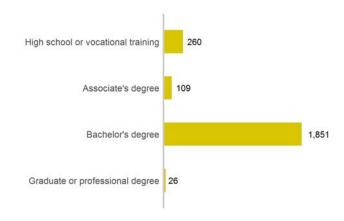
Of the total 1,969 job postings detailing the required level of experience, just over half (1,011) of employers expect between 3 and 5 years of relevant work experience. Following closely, entry level positions (0 to2 years) comprised 36% or 720 of the overall job postings in finance.

Business and finance positions desiring 6 or more years of experience, most likely reserved for supervisory or management roles, make up only 12% of the total job postings in the third quarter.

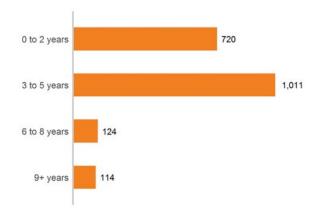
#### **Degrees and Certifications Required**

- Business Administration and Management
- Accounting
- Finance
- Engineering
- Human Resource Development

#### **Educational Attainment**



#### **Experience Required**





## Top Certification: Certified Public Accountant (CPA)



## Hot skills: Business Administration & Management

#### **Business & Finance in-Demand Skills**

The most often advertised baseline and specialized skills for Business and Finance occupations demonstrate that Oakland County employers seek workers with well-rounded foundational skills along with expertise in a specific, specialized skill. In addition to having expertise in accounting or financial analysis, Business and Finance professionals need to also have strong communication, writing, and problem solving skills.

#### **Technical in-Demand Skills**

- Microsoft Office
- Accounting/Budgeting/Cost Control/Financial Analysis/Statements
- Customer Service/Contact
- Supervisory Skills/Project Management/Scheduling
- Purchasing/Procurement/Supply Chain Management

#### Foundational In-Demand Skills

- Communication Skills/Team Work-Collaboration/ **Building Effective Relationships**
- Problem Solving/Analytical Skills/Creativity
- Self-Starter/Leadership/Decision Making
- Organizational Skills/Multi-tasking/Time Management//Detail-Oriented
- Planning/Research/Writing

#### **Job Type**

Temporary: 4.7% Full-time: 60.5% Part-time: 1.2%

#### **Certifications Required**

- Certified public accountant (CPA)
- Series 7
- American board for engineering and technology (ABET) Accredited
- Project Management Certification (E.G. PMP)
- Mortgage License



## Highest paying profession: Management analysts - \$43.19

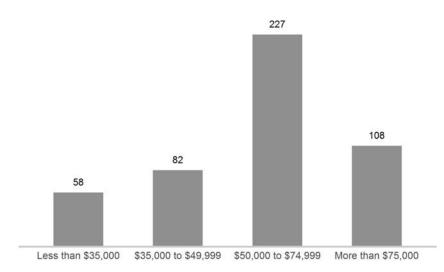
## Average advertised salary \$61,137

## **Business & Finance** Wages

Among the 475 online job postings which approximate wages for the overall job market related to business and finance, there has been near perfect consistency in wages since Q1 of 2016. More than 47% of advertised wages offered between \$50,000 and \$74,999. The most recent advertised average salary is \$61,137, a nominal 1% increase from Q2 at \$60,500, but also a 1% decline since Q1. Wages have remained relatively stable. All of the top ten occupations with the exception of entry-level loan officers offer more than \$15 dollars per hour while the most offer. At the median, most occupations offered hourly wages just below \$30.

#### **Advertised Wages in Job Postings**

Q3 2016



| Occupation<br>Code | Occupation Name  | Occupation Name Percentile Percentile |         | Median<br>Wages | 75th<br>Percentile<br>Wages | 90th<br>Percentile<br>Wages |
|--------------------|--|---------------------------------------|---------|-----------------|-----------------------------|-----------------------------|
| 13-1071            | Human Resources<br>Specialists                                       | \$17.78                               | \$22.08 | \$28.42         | \$36.05                     | \$44.85                     |
| 13-2011            | Accountants  | \$20.65                               | \$24.98 | \$33.20         | \$43.15                     | \$57.32                     |
| 13-1111            | Management Analysts  | \$20.46                               | \$30.19 | \$43.19         | \$57.09                     | \$75.48                     |
| 13-1023            | Purchasing Agents, Except<br>Wholesale, Retail, and Farm<br>Products | \$20.06                               | \$26.07 | \$33.65         | \$41.60                     | \$51.10                     |
| 13-2051            | Financial Analysts   | \$23.82                               | \$28.31 | \$35.74         | \$45.02                     | \$53.90                     |
| 13-1161            | Market Research Analysts and Marketing Specialists                   | \$16.33                               | \$20.93 | \$26.77         | \$37.64                     | \$48.27                     |
| 13-2072            | Loan Officers  | \$13.09                               | \$18.56 | \$26.02         | \$36.57                     | \$50.46                     |
| 13-1051            | Cost Estimators  | \$18.53                               | \$23.48 | \$30.68         | \$40.96                     | \$48.32                     |
| 13-2052            | Personal Financial Advisors  | \$20.93                               | \$26.49 | \$34.53         | \$55.48                     | \$97.58                     |
| 13-1151            | Training and Development Specialists                                 | \$15.90                               | \$20.42 | \$27.27         | \$37.42                     | \$46.95                     |



## Health Care

#### Introduction

WIN's health care occupation group includes jobs related to health care support and practitioners. Employment in this group has been consistently growing, more health care workers needed to care for Michigan's aging population and in response to regulatory and other changes. Registered nurses are routinely the most in-demand job in this group.

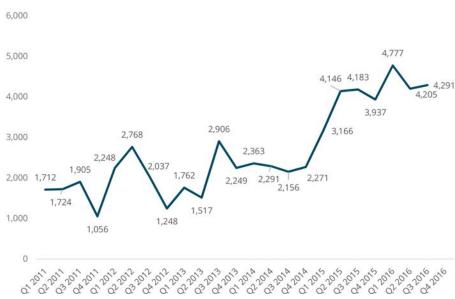
#### **Job Posting Analysis**

Online job postings for Health Care occupations in Oakland County increased slightly by 86 jobs (2%) between Q2 and Q3 2016. After peaking at 4,777 job postings in Q1 of 2016, ads for this occupation group have increased in three of the last five quarters. Similarly, ads have also remained higher than 4,000 in five of the last six quarters.

#### **Employment Analysis**

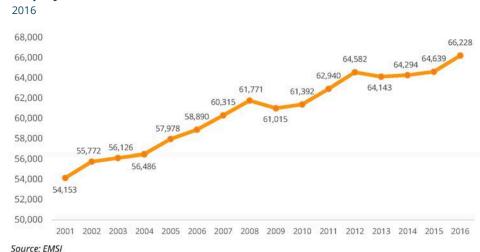
The increase in employer demand evident in Health Care postings during 2015 has resulted in an employment jump of 1,600 individuals (+2.5%). Unlike other occupation groups, Health Care employment was not severely cut during the Great Recession. Employment in this group has increased in all but two years since 2001.

#### **Online Job Postings**



Data: Burning Glass Technologies Analysis: Workforce Intelligence Network

#### **Employment Over Time**



Analysis: Workforce Intelligence Network



## 1,600 newly employed candidates.

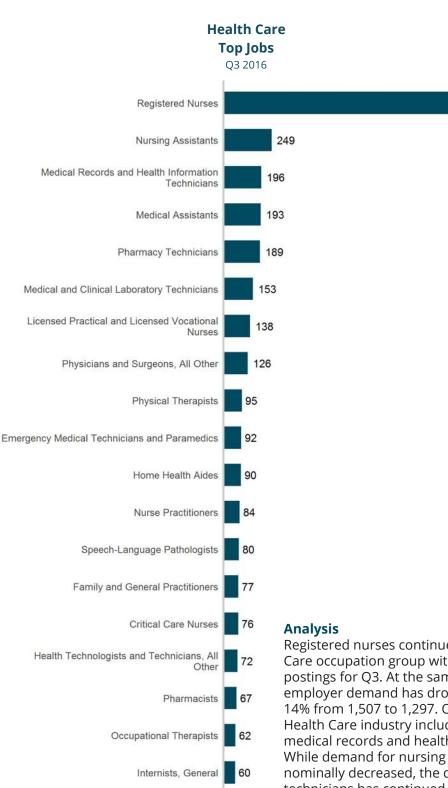
Data: Burning Glass Technologies

Analysis: Workforce Intelligence Network



## Most in-demand job: Registered nurses

1,297



Radiologic Technologists

Registered nurses continue to dominate the Health Care occupation group with nearly 1,300 online job postings for Q3. At the same time, since Q1 employer demand has dropped by approximately 14% from 1,507 to 1,297. Other top jobs in the Health Care industry include nursing assistants and medical records and health information technicians. While demand for nursing assisting positions have nominally decreased, the demand for health infotechnicians has continued to rise throughout 2016.



## Most often advertised education: High School or Vocational Training

## 2% Increase in employer demand from previous quarter

#### Health Care Educational Attainment Required

Educational attainment is fairly distributed across the spectrum of employer needs considering the wide-ranging positions within the broader Health Care industry, unlike many other industry groups. Whereas associate degrees are typically the most in demand educational credential particularly in Q1 and Q2 of 2016. For the first time this year, associate's degrees are eclipsed by high school or vocational training with 890 online job ads compared to 876 ads for jobs requiring at least an associate's degree. More than 580 ads sought those with Bachelor's degrees, and 230 employers were seeking those with a graduate or a professional degree.

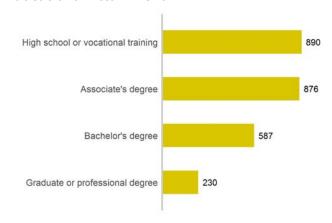
As it relates to experience in the Health Care industry, experience requirements are heavily skewed towards those at the entry level and those that have three to five years of experience. At the entry level, 1,584 online ads were generated, a 5% decrease from the second quarter, and a 17% decrease (334 fewer jobs) since the first quarter. In the same vein, there was a 16.8% decrease for positions requiring three to five years of experience from Q1 to Q3, a reduction in 77 jobs postings. Nonetheless, with little to no experience, prospective candidates can begin working in the growing field of Health Care.

Employer demand for those with more than six years of experience is very sparse, remaining consistently below 20 job ads for those between six to 8 years of experience, and nine years or more.

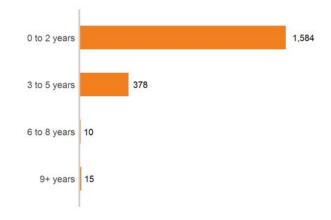
#### **Degrees and Certifications Required**

- Nursing Science
- Physical Therapy
- Public Health
- Social Work
- Occupational Therapy

#### **Educational Attainment**



#### **Experience Required**







## Hot Certification: American Heart Association Certification and Basic Cardiac Life Support

#### **Health Care in-Demand Skills**

The most frequently advertised baseline and specialized skills for Health Care occupations demonstrate that Oakland County employers seek workers with well-rounded foundational skills along with expertise of a specific health care skill, most often related to patients. In addition to having an excellent grasp on patient care, Health Care workers must also be able to communicate, organize, plan, and supervise others effectively.

#### **Technical in-Demand Skills**

- Patient Care/Home Health
- Treatment Planning/Discharge Planning
- Cardiopulmonary Resuscitation (CRP)/Advance Cardiac Life Support (ACLS)
- Supervisory Skills/Case Management
- Customer Service/Contact/Billing

#### **Job Type**

Temporary: 7.7% Full-time: 44.8% Part-time: 7.5%

#### Foundational In-Demand Skills

- Communication Skills/Team Work-Collaboration/Building Effective Relationships
- Organization, Detail-Oriented, Multi-Tasking,
- Physical Demand
- Supervisory Skills/Leadership/Project Management/Decision Making/Planning
- Writing/Typing/Computer Skills/Research

#### **Certifications Required**

- Registered Nurse
- American Heart Association
- First Aid CPR AED
- Basic Cardiac Life Support
- **Nursing Assistant**



## Average advertised salary: \$51,497



## Highest paying job: Physicians and Surgeons (\$93 per hour)

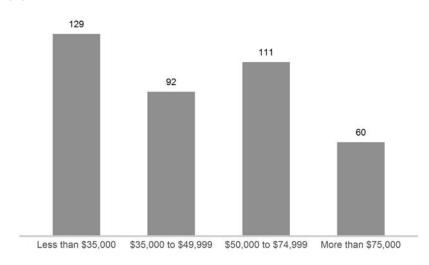
#### **Health Care** Wages

Advertised wages within the Health Care sector are distributed across the board, similar to the wide range of education requirements in the postings section. Most of the advertised wages fall under\$35,000 annually and between \$50,000 and \$75,000.

The wage disparity is most apparent in the wage table below. Median wages range from \$13.78 (nursing assistants) to \$93.04 (physicians and surgeons) per hour. In most positions, the wages nearly double with experience and education, from those at the 10th percentile compared to those at the 90th percentile.

#### **Advertised Wages in Job Postings**

Q3 2016



| Occupation<br>Code | Occupation Name                                       | 10th<br>Percentile<br>Wages | 25th<br>Percentile<br>Wages | Median<br>Wages | 75th<br>Percentile<br>Wages | 90th<br>Percentile<br>Wages |
|--------------------|---|-----------------------------|-----------------------------|-----------------|-----------------------------|-----------------------------|
| 29-1141            | Registered Nurses                                     | \$25.96                     | \$30.41                     | \$34.69         | \$39.69                     | \$56.73                     |
| 31-1014            | Nursing Assistants                                    | \$10.07                     | \$11.70                     | \$13.78         | \$16.04                     | \$17.94                     |
| 29-2071            | Medical Records and Health<br>Information Technicians | \$10.95                     | \$13.26                     | \$17.13         | \$21.18                     | \$24.24                     |
| 31-9092            | Medical Assistants                                    | \$10.83                     | \$12.47                     | \$14.15         | \$16.52                     | \$18.43                     |
| 29-2052            | Pharmacy Technicians                                  | \$9.59                      | \$11.39                     | \$14.10         | \$16.97                     | \$19.05                     |
| 29-2012            | Medical and Clinical Laboratory<br>Technicians        | \$12.05                     | \$13.78                     | \$16.63         | \$21.42                     | \$27.94                     |
| 29-2061            | Licensed Practical and Licensed<br>Vocational Nurses  | \$17.13                     | \$20.18                     | \$23.63         | \$27.19                     | \$29.48                     |
| 29-1069            | Physicians and Surgeons, All Other                    | \$27.71                     | \$76.75                     | \$93.04         | \$111.92                    | \$175.97                    |
| 29-1123            | Physical Therapists                                   | \$27.06                     | \$33.48                     | \$40.74         | \$51.87                     | \$74.59                     |
| 29-2041            | Emergency Medical Technicians and                     | \$10.39                     | \$12.68                     | \$15.55         | \$18.45                     | \$21.93                     |



## Information Technology

#### Introduction

Information technology jobs include occupations that are associated with entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services. While the information technology group does not currently meet the employment levels of the others, it is quickly growing.

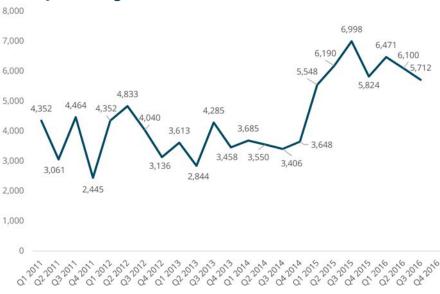
#### **Job Posting Analysis**

Online job postings for IT occupations fell by 6.4% (388 fewer postings) between Q2 and Q3. Since Q3 of last year, there has been a 18.4% decline in employer demand. Despite the precipitous decline yearover-year, employer postings for IT positions in Oakland County has remained greater than 6,000 in three of the last five quarters.

#### **Employment Analysis**

Employment for IT occupations in Oakland County continues its gradual climb – the beginning of 2016 marked the seventh consecutive year of growth. The over 31,000 workers in these jobs is the highest the region has had since 2002. With high demand, the IT occupation group should continue to expand in Oakland County.

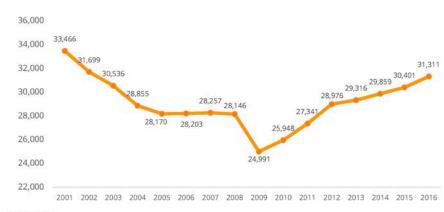
#### **Online Job Postings**



Data: Burning Glass Technologies Analysis: Workforce Intelligence Network

### **Employment Over Time**

2016



Source: EMSI Analysis: Workforce Intelligence Network



## Eighth consecutive year of employment growth



## Software developer job postings in extremely high-demand

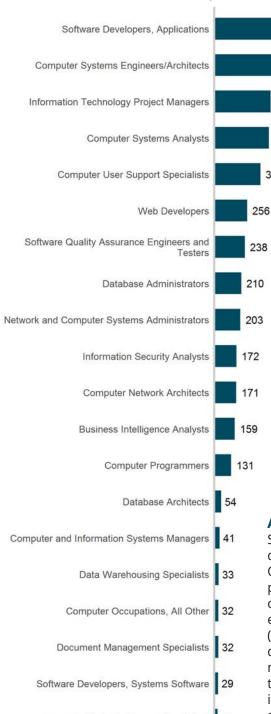
1,950

### **Information Technology Top Jobs**



427

360



Computer Network Support Specialists 26

### **Analysis**

Software developers for applications continue to dominate job demand in the IT industry group for Oakland County. The number of online job postings for software developers alone dwarfs that of the top job second on the list, computer systems engineers/architects. Even with a 10% reduction (-225 ads) in online postings for software developers for applications since Q2, there are nearly triple the amount of postings for developers than there are for its closest rival. Other top jobs include information technology project managers, and computer systems analysts.





## Bachelor's degree most often required

### 6.4% decrease in employer demand

#### **Information Technology Educational Attainment Required**

A bachelor's degree is the most overwhelmingly demanded (86%) educational credential by employers in the IT field within Oakland County.

Fewer opportunities exist for those with a high school diploma or vocational training, an associate's degree particularly in areas such as web development and certainly graduate and professional degrees.

In each of the last three mentioned educational categories, fewer than 6% of online ads desired those with any degree other than a bachelor's.

Employers primarily prefer (52%) prospective candidates with three to five-years of experience. Followed most closely by those with only entry level experience, nearly 850 ads for those with no to little related work experience.

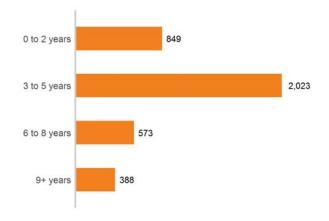
#### **Degrees and Certifications Required**

- Computer Science
- Engineering, General
- Electrical & Electronic Engineering Technologies
- Mechanical Engineering
- Business Administration & Management

#### **Educational Attainment**



#### **Experience Required**





## Hot languages: Java, SQL, Oracle, C++, C#

### Hot certifications: ABET, PMP, CISSP

#### **Information Technology in-Demand Skills**

The most often advertised baseline and specialized skills for IT occupations demonstrate that Oakland County employers seek workers with well-rounded foundational skills along with expertise of a specific IT skill, most often a computer language. In addition to knowing languages like SQL or JAVA, IT workers must also possess foundational skills such as communication, writing, and problem solving.

#### **Technical in-Demand Skills**

- Software Development/Engineering
- Microsoft Office
- Project Management
- Java, JavaScript, SQL, Oracle, C++, C#
- Validation, Product Development, Business Process

#### **Foundational In-Demand Skills**

- Communication Skills/Team Work-Collaboration/ Building Effective Relationships/Time Management
- Writing, Research, Presentation Skills, English
- Creativity, Self-Starter, Multi-Tasking
- Organizational Skills/ Leadership/Project Planning and Development/Detail Oriented
- **Mathematics**

#### **Job Type**

Temporary: 3.0% Full-time: 49.5% Part-time: 0.8%

#### **Certifications Required**

- American Board for Engineering and Technology (ABET)
- Project Management Certification (PMP)
- **Certified Information Systems Security** Professional (CISSP)
- IT Infrastructure Library
- Six Sigma Green Belt



## Less than 5 years of experience required



## Average advertised salary: \$82,981

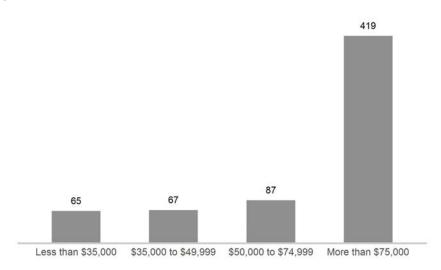
#### **Information Technology** Wages

The high demand and high level of skills necessary for IT occupations is demonstrated through the advertised salaries - for postings that did provide that information, the overwhelming amount (68%) offered more than \$75,000 annually. The average advertised salary in the IT occupation group was \$82,981, indeed the highest average advertised salary among all fields in Oakland County.

The range of median wages is relatively undispersed in nine out of the ten occupation groups listed in the wage table below. With the exception of computer user support specialists, the median wage ranged from \$30.79 (web developers) to \$41.24 (emergency medical technicians and paramedics) per hour. The median wage hovers close to \$35 dollars per hour across this wage table.

#### **Advertised Wages in Job Postings**

Q3 2016



| Occupation<br>Code | Occupation Name                                  | 10th<br>Percentile<br>Wages | 25th<br>Percentile<br>Wages | Median<br>Wages | 75th<br>Percentile<br>Wages | 90th<br>Percentile<br>Wages |
|--------------------|--|-----------------------------|-----------------------------|-----------------|-----------------------------|-----------------------------|
| 15-1132            | Software Developers, Applications                | \$23.53                     | \$28.64                     | \$37.33         | \$48.42                     | \$58.25                     |
| 15-1199            | Computer Systems Engineers/Architects            | \$25.31                     | \$32.65                     | \$40.13         | \$49.73                     | \$58.93                     |
| 15-1199            | Information Technology Project Managers          | \$25.31                     | \$32.65                     | \$40.13         | \$49.73                     | \$58.93                     |
| 15-1121            | Computer Systems Analysts                        | \$21.88                     | \$30.04                     | \$38.73         | \$48.99                     | \$59.06                     |
| 15-1151            | Computer User Support Specialists                | \$13.14                     | \$17.30                     | \$22.80         | \$31.07                     | \$39.61                     |
| 15-1134            | Web Developers                                   | \$20.67                     | \$24.43                     | \$30.79         | \$39.44                     | \$48.88                     |
| 15-1199            | Software Quality Assurance Engineers and Testers | \$25.31                     | \$32.65                     | \$40.13         | \$49.73                     | \$58.93                     |
| 15-1141            | Database Administrators                          | \$22.51                     | \$29.69                     | \$40.41         | \$51.04                     | \$61.34                     |
| 15-1142            | Network and Computer Systems Administrators      | \$22.70                     | \$28.45                     | \$36.36         | \$44.55                     | \$52.80                     |
| 15-1122            | Emergency Medical Technicians and<br>Paramedics  | \$25.41                     | \$29.05                     | \$41.24         | \$50.31                     | \$58.09                     |



## K Skilled Trades & Technicians (Manufacturing Focused)

#### Introduction

WIN's technicians/skilled trades category includes jobs related to advanced manufacturing. Southeast Michigan has more demand for skilled-trades labor, such as CNC machinists and welders, than almost anywhere else in the country.

NOTE: Skilled trades related to construction and assembly are not included in this cluster, as the focus is on advanced manufacturing only.

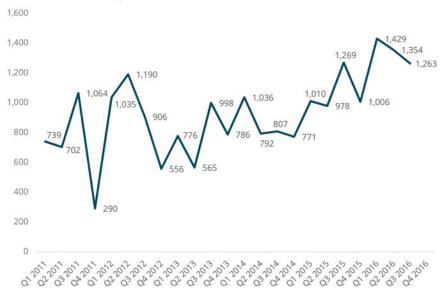
#### **Job Posting Analysis**

Employer demand for skilled trades has remained on a steady decline since peaking in Q1 of 2016. Since Q2 online job ads have decreased by 6.7%. Since Q1 there has a been a 11.6% decrease or a total of 166 fewer job postings in the skilled trades field for Oakland County for a total of 1,263 postings. Withholding the incremental decline since Q1, for five of the last five quarters, online posting ads have remained greater than 1,000.

#### **Employment Analysis**

**Employment for Skilled Trades and** Technicians increased for a sixth consecutive year as 2016 began. During Q1 2016, this occupation group employed 30,300 individuals in Oakland County, a 2.9% rise compared to 2015. Employment has now surpassed 2007 levels, but remains well below early 2000 levels.

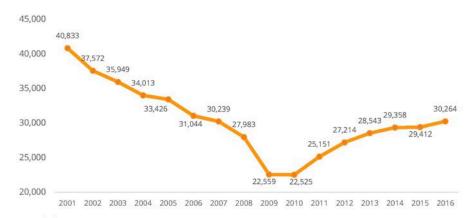




Source: Burning Glass Technologies Analysis: Workforce Intelligence Network

Data: Burning Glass Technologies Analysis: Workforce Intelligence Network

#### **Employment Over Time**



Source: EMSI Analysis: Workforce Intelligence Network



**Production Workers** 

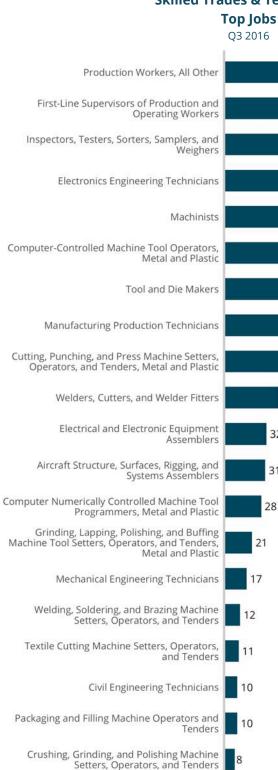




## Highest employment since 2007

181

#### **Skilled Trades & Technicians** Top Jobs



#### **Analysis**

31

Production workers have remained the most in-demand occupation since the first quarter of 2016 for Oakland County in the IT industry with 181 ads. Coming in a close second and third include first-line supervisors of production and operating workers in addition to inspectors, testers sorters and samplers with 174 and 164 job postings respectively.



# Emphasis placed on high school diploma & vocationally trained candidates

## Employer near record high demand

#### Skilled Trades & Technicians Educational Attainment Required

Among the available online job postings providing educational attainment requirements, the majority of employers indicated a desire for those with a high school diploma or vocation training for their prospective candidates.

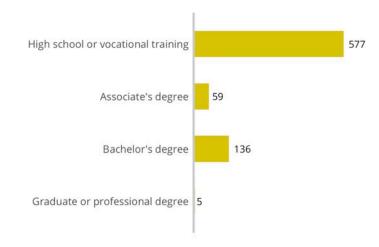
By far, the least desired educational completion level among employers in the Skilled Trades field is the associate's degree with only 59 online ads. Another 154 ads indicated that a Bachelor's degree is among the necessary criteria for employment, mostly likely for positions in management or supervision.

There is typically a greater emphasis on experience for Skilled Trades occupations with most (302 postings) at the entry level and three to five-year level (245 postings) of experience-competency. Beyond five years of experience there is a precipitous drop in employer demand for prospective candidates.

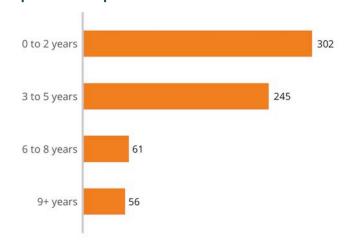
#### **Degrees and Certifications Required**

- Engineering, General
- Mechanical Engineering
- Electrical and Electronic Engineering Technologies
- Business Administration and Management
- Computer Science

#### **Educational Attainment**



#### **Experience Required**



## Entry-level positions highest in demand

## Hot skill: Inspection & Repair

#### **Skilled Trades & Technicians in-Demand Skills**

The most often advertised baseline and specialized skills for Skilled Trades and Technicians demonstrate that Oakland County employers seek workers with well-rounded foundational skills along with expertise in traditional or new skilled trade practices. In addition to being able to perform their specific trade-related duties such as inspection or repair, these workers must also be able to communicate in teams, troubleshoot and problem solve. Furthermore, having Microsoft Office skills is now a common requirement in some Skilled Trades openings.

#### **Technical in-Demand Skills**

- Inspection/Repair
- Machining
- Hand Tools/Calibration/Soldering/Welding/ Grinders
- Microsoft Office
- Computer Numerical Control (CNC)

#### **Job Type**

Temporary: 2.2% Full-time: 64.7% Part-time: 6.7%

#### **Foundational In-Demand Skills**

- Communication Skills/Team Work-Collaboration /Time Management
- Troubleshooting/Preventative Maintenance/ Problem Solving/Work Area Maintenance
- Physical Demand
- Organizational Skills/Leadership/Project Management/Planning/Multi-tasking
- **Mathematics**

#### **Certifications Required**

- Forklift Operator
- Six Sigma Black Belt
- American Board for Engineering and Technology
- Mortgage Loan Officer
- Six Sigma Certification



## Average advertised salary: \$36,637



# Six of top jobs offered \$20+ per hour

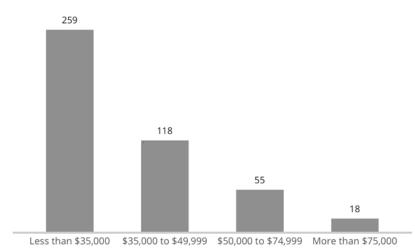
#### **Skilled Trades & Technicians Wages**

Among the online postings that provided advertised salaries, 57% offered wages less than \$35,000. Fewer than 4% of jobs in the Skilled Trades field offered wages upwards of \$75,000 while 38% of ads offered salaries between \$35,000 and \$74,999. The average salary across the industry \$36,637, roughly a 3% decline in average advertised salaries since the since quarter of 2016.

Median hourly wages remained greater than \$15 per hour across the top ten most indemand in Skilled Trades, with the majority of positions were offering more than \$20 per hour. Though the majority of advertised salaries in the Skilled Trades group in Q1 2016 were below \$35,000 per year, the average advertised salary for Michigan workers was \$37,995. This is 12% higher than the state's median earnings for all workers, \$34,000. Higher wages in the Skilled Trades group are available with short-term, post-secondary training, as well as advancement to managerial and supervisory roles.

#### **Advertised Wages in Job Postings**

Q3 2016



| Occupation<br>Code | Occupation Name   | 10th<br>Percentile<br>Wages | 25th<br>Percentile<br>Wages | Median<br>Wages | 75th<br>Percentile<br>Wages | 90th<br>Percentile<br>Wages |
|--------------------|---|-----------------------------|-----------------------------|-----------------|-----------------------------|-----------------------------|
| 51-9199            | Production Workers, All Other   | \$11.08                     | \$14.97                     | \$17.65         | \$19.68                     | \$23.24                     |
| 51-1011            | First-Line Supervisors of<br>Production and Operating<br>Workers                              | \$17.40                     | \$22.26                     | \$30.30         | \$39.44                     | \$48.22                     |
| 51-9061            | Inspectors, Testers, Sorters,<br>Samplers, and Weighers                                       | \$9.99                      | \$11.76                     | \$15.85         | \$23.40                     | \$29.15                     |
| 17-3023            | Electronics Engineering<br>Technicians  | \$14.25                     | \$17.14                     | \$21.89         | \$29.65                     | \$35.60                     |
| 51-4041            | Machinists  | \$12.89                     | \$16.42                     | \$21.31         | \$28.36                     | \$33.65                     |
| 51-4011            | Computer-Controlled Machine<br>Tool Operators, Metal and<br>Plastic                           | \$12.37                     | \$15.31                     | \$22.45         | \$25.65                     | \$30.65                     |
| 51-4111            | Tool and Die Makers   | \$16.93                     | \$21.32                     | \$27.12         | \$34.78                     | \$38.27                     |
| 17-3029            | Manufacturing Production<br>Technicians   | \$16.56                     | \$22.59                     | \$31.10         | \$37.37                     | \$48.26                     |
| 51-4031            | Cutting, Punching, and Press<br>Machine Setters, Operators,<br>and Tenders, Metal and Plastic | \$10.44                     | \$12.23                     | \$15.45         | \$19.87                     | \$27.26                     |
| 51-4121            | Welders, Cutters, and Welder<br>Fitters   | \$12.89                     | \$15.67                     | \$18.58         | \$22.87                     | \$29.25                     |

## Transportation, Distribution, and Logistics (TDL)

#### Introduction

Transportation, distribution, and logistics (TDL) workers help move materials in an efficient manner whether it is from one company to another or directly to a consumer. Logistics workers range from materials movers to logistics analysts, coordinating and analyzing material and goods movement.

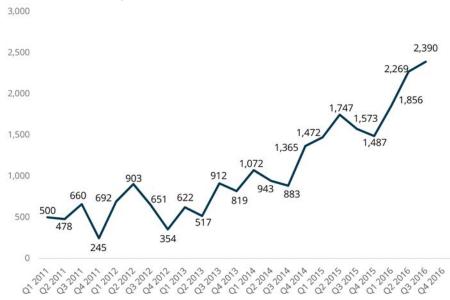
#### **Job Posting Analysis**

Online job posting for TDL occupations has reached yet another record high in Q3 with 2,390 ads in Oakland County with a 5% increase since the second quarter. Over the past year, a surge in demand for truck drivers has largely caused the substantial increase in posting intensity.

#### **Employment Analysis**

Employment of TDL workers increased to over 68,000 workers (+2.3%) thus far in 2016. This represents the largest level of employment in Oakland County for this occupation group since 2005. Since bottoming out in 2009 during the Great Recession, employment has now increased for six consecutive years.

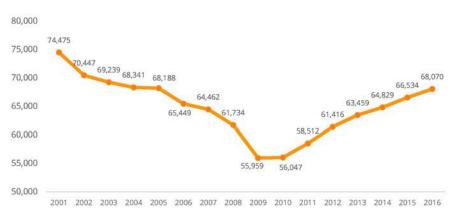
#### **Online Job Postings**



Data: Burning Glass Technologies Analysis: Workforce Intelligence Network

#### **Employment Over Time**

2016



## 15% increase in truck driver demand since last Q2.

### Most in-demand job: Truck drivers

1,399

#### Transportation, Distribution, and Logistics (TDL) Top Jobs

306



#### **Analysis**

Heavy and tractor-trailer truck drivers continue to dominate TDL online postings with more four times as many ads as the next most in-demand occupation. Since Q2 alone, there has been a 13% increase in online job postings for truck driving positions in Oakland County. Other top jobs have remained consistent throughout 2016. Such positions include laborers and freight, stock and material movers, automotive and watercraft service attendants, and logisticians.



## Entry-level opportunities remain high

### 22.3% increase in employer demand

#### **Transportation, Distribution, and Logistics (TDL) Educational Attainment Required**

Entry level job opportunities in transportation, distributions, and logistics (TDL) are abundant as they require little to no experience (77.3% of postings) and among job postings that included educational attainment criterion, 68% of postings required only a high school diploma or vocational training.

Bachelor's degrees were the second most in demand level of educational background for prospective candidates, roughly 27% of available postings.

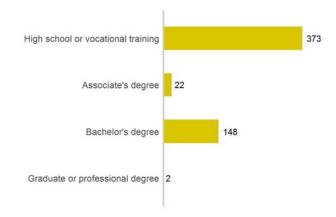
Meanwhile, a very small emphasis is placed on associates degrees and candidates with graduate or professional degrees.

The second most desired experience level is between three and five years but entry-level positions (zero to two years' experience) are desired four times more.

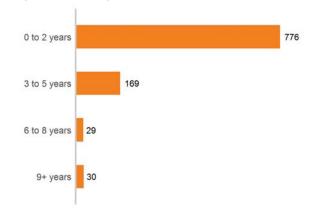
#### **Degrees and Certifications Required**

- Logistics, Materials, and Supply Chain Management
- Business Administration and Management
- Engineering, General
- Automotive Engineering Technology
- Electrical and Electronic Engineering Technologies

#### **Educational Attainment**



#### **Experience Required**







#### Transportation, Distribution, and Logistics (TDL) in-Demand Skills

The most often advertised baseline and specialized skills for TDL occupations demonstrate that Oakland County employers seek workers with well-rounded foundational skills along with expertise in TDL-specific duties. In addition to being able to have skills such as auto repair or inventory management, these workers must also be able to communicate in teams, problem solve, and even be knowledgeable with Microsoft Office programs.

#### **Technical in-Demand Skills**

- Repair/Inspection/Auto Repair
- Microsoft Office
- Supervisory Skills
- Supply Chain Knowledge/Management/ Logistics/Inventory Management
- Customer Service/Contact

#### Foundational In-Demand Skills

- No Data Available
- Note: 69% of records have been excluded because they do not include a skill.

#### **Job Type**

Temporary: 6.8% Full-time: 30.1% Part-time: 3.3%

#### **Certifications Required**

- CDL Class A
- Commercial Driver's License
- Automotive Service Excellence (ASE)
- Aerial Lift Certificate
- Certified in Production and Inventory Management





## Industry average advertised salary: \$62,382

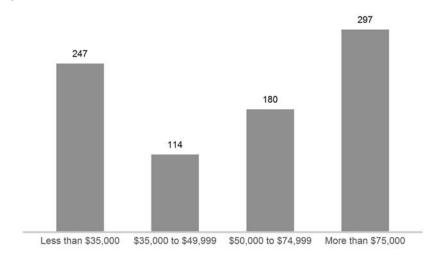


#### **Transportation, Distribution, and Logistics** (TDL) Wages

For the first time in 2016, the advertised salaries for positions offering more than \$75,000 (35%) were greater than positions with annual wages less than \$35,000 (29.5%) in the TDL occupation group for Oakland Count postings. While job postings advertising salaries do not represent wages for all job postings in TDL, they serve as a large enough proxy to approximate that there is greater job availability in the field with higher wages. Approximately 35% of advertised salaries offered between \$35,000 and 74,999. The average advertised salary in Q3 was \$62,382.

The concentration of most wages below \$35,000 and above \$75,000 per year in TDL may be better evaluated by the wage table below. While logisticians and other closely related positions may earn more than \$40 per hour at the median, automotive and watercraft attendants, and material moving workers and other positions of the like earn around \$10 per hour at the median.

#### **Advertised Wages in Job Postings**



| Occupation<br>Code | Occupation Name   | 10th 25th Percentile Percenti Wages Wages |         | Median<br>Wages | 75th<br>Percentile<br>Wages | 90th<br>Percentile<br>Wages |
|--------------------|---|---|---------|-----------------|-----------------------------|-----------------------------|
| 53-3032            | Heavy and Tractor-Trailer<br>Truck Drivers                | \$13.82                                   | \$16.32 | \$19.15         | \$23.90                     | \$29.64                     |
| 53-7062            | Laborers and Freight, Stock,<br>and Material Movers, Hand | \$9.13                                    | \$10.77 | \$13.45         | \$16.82                     | \$20.56                     |
| 53-6031            | Automotive and Watercraft<br>Service Attendants           | \$8.25                                    | \$8.86  | \$9.91          | \$11.55                     | \$13.81                     |
| 43-5081            | Stock Clerks- Stockroom,<br>Warehouse, or Storage Yard    | \$8.56                                    | \$9.50  | \$11.67         | \$15.17                     | \$19.55                     |
| 13-1081            | Logisticians  | \$25.97                                   | \$32.48 | \$41.44         | \$49.32                     | \$57.51                     |
| 13-1081            | Logistics Analysts  | \$25.97                                   | \$32.48 | \$41.44         | \$49.32                     | \$57.51                     |
| 11-3071            | Logistics Managers  | \$31.34                                   | \$38.48 | \$49.65         | \$63.64                     | \$80.69                     |
| 15-1199            | Data Warehousing Specialists                              | \$25.31                                   | \$32.65 | \$40.13         | \$49.73                     | \$58.93                     |
| 53-7061            | Cleaners of Vehicles and<br>Equipment                     | \$8.21                                    | \$8.73  | \$9.58          | \$11.59                     | \$14.34                     |
| 53-6021            | Parking Lot Attendants                                    | \$8.17                                    | \$8.58  | \$9.27          | \$10.26                     | \$12.89                     |

**Annual Labor Market Data** 

|                   | 2010<br>Annual | 2011<br>Annual | 2012 Annual | 2013<br>Annual | 2014 Annual | 2015 Annual | 2016 to-<br>date<br>(through<br>Sept<br>2016) | Change<br>from<br>2015 | Percent<br>Change<br>from 2015 |
|-------------------|----------------|----------------|-------------|----------------|-------------|-------------|---|------------------------|--------------------------------|
| Labor Force       | 802,754        | 774,443        | 769,010     | 770,236        | 762,011     | 750,854     | 769,541                                       | 18,687                 | 2.5%                           |
| Employment        | 678,426        | 674,177        | 679,096     | 681,158        | 687,553     | 696,033     | 719,771                                       | 23,738                 | 3.4%                           |
| Unemployment      | 124,328        | 100,266        | 89,914      | 89,078         | 74,459      | 54,821      | 49,770  | -5,051                 | -9.2%                          |
| Unemployment Rate | 15.5%          | 12.9%          | 11.7%       | 11.6%          | 9.8%        | 7.3%        | 6.5%  | -0.8%                  | na                             |

\*Note: Monthly data averaged by year Data: Bureau of Labor Statistics

**Quarterly Labor Market Data** 

|                   | 3rd<br>Quarter<br>2015 | 4th<br>Quarter<br>2015 | 1st Quarter<br>2016 | 2nd<br>Quarter<br>2016 | 3rd Quarter<br>2016 | Change from<br>2nd Quarter<br>2016 | Percent<br>Change<br>from 2nd<br>Quarter<br>2016 | One-Year<br>Change<br>from 3rd<br>Quarter<br>2015 | One-Year<br>Percent<br>Change<br>from 3rd<br>Quarter<br>2015 |
|-------------------|------------------------|------------------------|---------------------|------------------------|---------------------|------------------------------------|--|---|--|
| Labor Force       | 757,189                | 750,729                | 760,056             | 766,218                | 782,348             | 16,130                             | 2.1%   | 25,158  | 3.3%   |
| Employment        | 699,174                | 701,318                | 711,498             | 720,740                | 727,074             | 6,334                              | 0.9%   | 27,900  | 4.0%   |
| Unemployment      | 58,015                 | 49,411                 | 48,559              | 45,478                 | 55,273              | 9,796                              | 21.5%  | -2,742  | -4.7%  |
| Unemployment Rate | 7.7%                   | 6.6%                   | 6.4%                | 5.9%                   | 7.1%                | 1.1%                               | na   | -0.6%   | na   |

\*Note: Monthly data averaged by quarter

Data: Bureau of Labor Statistics

Monthly Labor Market Data

| Wildlich Y Labor Wild | Northly Eddor Market Data |                |                |                 |                  |                  |                 |                  |               |            |          |           |           |                |                |
|-----------------------|---------------------------|----------------|----------------|-----------------|------------------|------------------|-----------------|------------------|---------------|------------|----------|-----------|-----------|----------------|----------------|
|                       | July 2015                 | August<br>2015 | September 2015 | October<br>2015 | November<br>2015 | December<br>2015 | January<br>2016 | February<br>2016 | March<br>2016 | April 2016 | May 2016 | June 2017 | July 2017 | August<br>2017 | September 2017 |
| Labor Force           | 762,721                   | 759,556        | 749,291        | 754,575         | 747,241          | 750,371          | 752,791         | 759,537          | 767,841       | 758,192    | 767,644  | 772,817   | 781,402   | 782,114        | 783,527        |
| Employment            | 696,790                   | 701,442        | 699,291        | 698,663         | 702,213          | 703,077          | 703,746         | 712,251          | 718,496       | 718,192    | 723,857  | 720,171   | 724,008   | 724,778        | 732,437        |
| Unemployment          | 65,931                    | 58,114         | 50,000         | 55,912          | 45,028           | 47,294           | 49,045          | 47,286           | 49,345        | 40,000     | 43,787   | 52,646    | 57,394    | 57,336         | 51,090         |
| Unemployment Rate     | 8.6%                      | 7.7%           | 6.7%           | 7.4%            | 6.0%             | 6.3%             | 6.5%            | 6.2%             | 6.4%          | 5.3%       | 5.7%     | 6.8%      | 7.3%      | 7.3%           | 6.5%           |

\* Note: Data shown for 15 most recently available months

Data: Bureau of Labor Statistics

#### Oakland County Job Posting Data by Occupation Group\* Over Time

|   | Q3 2015 | Q4 2015 | Q1 2016 | Q2 2016 | Q3 2016 | Change Over Time | Annual Change<br>Q3 2015-Q3<br>2016 | Quarter Growth<br>Q1 2016-Q3<br>2016 |
|---|---------|---------|---------|---------|---------|------------------|-------------------------------------|--------------------------------------|
| Total Postings                              | 40,219  | 44,474  | 39,030  | 43,058  | 42,873  |                  | 6.6%                                | 9.8%                                 |
| Agriculture                                 | 438     | 438     | 415     | 520     | 534     |                  | 21.9%                               | 28.7%                                |
| Business & finance                          | 3,432   | 3,730   | 3,165   | 3,273   | 3,017   |                  | -12.1%                              | -4.7%                                |
| Construction                                | 331     | 310     | 228     | 329     | 414     |                  | 25.1%                               | 81.6%                                |
| Customer service                            | 8,277   | 9,717   | 8,642   | 9,403   | 10,413  |                  | 25.8%                               | 20.5%                                |
| Education                                   | 528     | 728     | 566     | 543     | 796     |                  | 50.8%                               | 40.6%                                |
| Energy                                      | 19      | 5       | 7       | 7       | 3       |                  | -84.2%                              | -57.1%                               |
| Engineers & designers                       | 3,822   | 4,324   | 3,941   | 4,039   | 3,493   |                  | -8.6%                               | -11.4%                               |
| Health care                                 | 4,146   | 4,183   | 3,937   | 4,205   | 4,291   | -                | 3.5%                                | 9.0%                                 |
| Information technology                      | 6,190   | 6,998   | 5,824   | 6,100   | 5,712   |                  | -7.7%                               | -1.9%                                |
| Skilled trades & technicians                | 978     | 1,269   | 1,006   | 1,354   | 1,263   | //               | 29.1%                               | 25.5%                                |
| Transportation, distribution, and logistics | 1,747   | 1,573   | 1,487   | 2,269   | 2,390   |                  | 36.8%                               | 60.7%                                |

<sup>\*</sup>Note: Some overlap exists between groups, the occupational groups are not mutually exclusive. Thus, postings should not be added from one group to another but instead should be analyzed on their own.

#### Job Posting Data by Occupation Group\* Over Time

|   | Q3 2015 | Q4 2015 | Q1 2016 | Q2 2016 | Q3 2016 | Change Over Time | Annual Change<br>Q3 2015-Q3<br>2016 | Quarter Growth<br>Q1 2016-Q3<br>2016 |
|---|---------|---------|---------|---------|---------|------------------|-------------------------------------|--------------------------------------|
| Total Postings                              | 129,794 | 140,225 | 126,959 | 139,765 | 149,379 |                  | 15.1%                               | 17.7%                                |
| Agriculture                                 | 1,644   | 1,578   | 1,426   | 1,835   | 1,776   |                  | 8.0%                                | 24.5%                                |
| Business & finance                          | 9,437   | 10,547  | 8,884   | 9,011   | 9,044   |                  | -4.2%                               | 1.8%                                 |
| Construction                                | 1,096   | 1,183   | 917     | 1,281   | 1,492   |                  | 36.1%                               | 62.7%                                |
| Customer service                            | 25,802  | 30,285  | 27,235  | 30,303  | 34,218  |                  | 32.6%                               | 25.6%                                |
| Education                                   | 2,227   | 2,584   | 2,219   | 2,114   | 3,034   |                  | 36.2%                               | 36.7%                                |
| Energy                                      | 224     | 264     | 211     | 272     | 259     |                  | 15.6%                               | 22.7%                                |
| Engineers & designers                       | 9,753   | 10,433  | 9,675   | 9,454   | 8,977   |                  | -8.0%                               | -7.2%                                |
| Health care                                 | 17,394  | 17,110  | 17,666  | 17,880  | 20,099  |                  | 15.6%                               | 13.8%                                |
| Information technology                      | 16,922  | 19,360  | 16,403  | 17,335  | 16,966  |                  | 0.3%                                | 3.4%                                 |
| Skilled trades & technicians                | 3,961   | 4,409   | 3,675   | 4,503   | 4,755   | <b>/</b>         | 20.0%                               | 29.4%                                |
| Transportation, distribution, and logistics | 9,901   | 8,405   | 7,909   | 11,380  | 13,548  |                  | 36.8%                               | 71.3%                                |

<sup>\*</sup>Note: Some overlap exists between groups, the occupational groups are not mutually exclusive. Thus, postings should not be added from one group to another but instead should be analyzed on their own.

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