

PATHWAYS TO GOOD-PAYING CAREERS:
How Young Adults Obtain Good-Paying Jobs
Without Four-Year Degrees

A report from Michigan Future, Inc.
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PATHWAYS TO GOOD PAYING CAREERS: HOW YOUNG ADULTS OBTAIN GOOD-PAYING JOBS WITHOUT FOUR-YEAR DEGREES

A REPORT FROM MICHIGAN FUTURE, INC.
DECEMBER, 1999

I. INTRODUCTION

This report was made possible by a generous grant from the Hudson-Webber Foundation.

Its goal is to provide policymakers, educators and employers with ideas on how to better connect Michigianians to good-paying occupations and careers which do not require a four-year degree. Policy recommendations are based on research into the pathways that young adults (18-39 year olds) in metropolitan Detroit have taken to gain these jobs.

This report is part of an ongoing series of Michigan Future, Inc. (MFI) projects designed to help better connect Michigianians to employment opportunities being created by our growing and changing economy.

A central feature of the MFI vision for economic success in the New Economy is the importance of empowered, skilled frontline workers. These technical and professional workers are likely to be the backbone of the Information Age economy, just as factory workers were in the Industrial Age.

Almost all these jobs will require skills beyond a high school degree, but many will not require a four-year college degree. These occupations pay well and have great career ladders. They will be the path to the middle class for many in the New Economy.

Unfortunately, today there are more of these jobs available than there are people with the skills to do these jobs. The pipeline of people preparing for these careers is, almost certainly, far smaller than projected employment opportunities.

This shortage of technical workers is as much structural as cyclical. The shortage would be a reality even if the economy was not as hot as it is. There are two main reasons for the shortage: cultural and demographic.

Getting a four-year degree and becoming a professional is now the goal of nearly everyone. And for students there is the added pressure of expectations from parents, peers and educators. Most people do not know how well paying most technical occupations are, but even when they do, these are now low prestige occupations.

Another reason for the shortage is demographic. Michigan and the nation are experiencing a dramatic slowing of the growth in the labor force. This will likely continue for the next three decades--until the Baby Boomers retire.

So despite these opportunities, employers, in all industries, report a shortage of workers for these good-paying jobs. We now have the paradox of an economy that is creating good-paying jobs for which employers cannot find qualified workers, at the same time that there are many workers in lower-paying jobs who have not enjoyed the benefits of the strong economic expansion.

Dealing with this paradox is important for the future success of Michigan's economy. The communities that figure out how to attract and train people for skilled frontline jobs will be the winners in the New Economy.

Left unsolved, the shortage of skilled frontline workers will inevitably cause the economy to slow. Economic growth will be lost because employers will be unable to find the workers necessary to take advantage of the economic opportunities being created by a growing economy.

Maybe more importantly, failing to deal with this mismatch will prevent many individuals and their families from realizing the American Dream.

Michigan policymakers have been struggling with how to address this skills mismatch. Most observers believe that the shortages in these occupations are getting worse. This is true despite efforts to provide students and adult job seekers with better information about good-paying careers that do not require four-year degrees and initiatives to improve the education and training system for these occupations.

One source of information on how we might design a more effective career preparation system is by learning how current workers without four-year degrees have obtained good-paying jobs. Learning from those who are succeeding in these occupations should provide valuable guidance in the development of strategies by policymakers, educators and employers.

II. THE STUDY

The core of this study is market research on the pathways followed by 18-39 year olds without four-year degrees in Wayne, Oakland and Macomb counties to obtain jobs that pay at least \$30,000 a year.

Because of the interest of both the Hudson-Webber Foundation--the project's funder-- and MFI in better connecting residents of the City of Detroit to good paying careers, the market research was designed to place a special emphasis on those who attended high school in the City of Detroit.

The market research includes two focus groups--one of suburbanites, the other of African-Americans who graduated from a Detroit high school--as well as a household survey. The survey was designed to provide a sample evenly divided between suburbanites and those who graduated from a Detroit high school.

The goal of the research is to provide policymakers, educators and employers with valuable information on how to improve the performance of the career preparation system in the City of Detroit as well as throughout metropolitan Detroit and the state.

Specifically, the study is designed to answer four questions:

- who are the young adults who are working in these good-paying jobs that do not require a four-year degree?
- what occupations are they in?
- how and when did they get interested in their current occupations?
- where did they learn the skills needed to obtain their current job?

To produce this report MFI assembled a team with broad experience in market research and workforce development policy:

- * Lou Glazer, Executive Director, Michigan Future, Inc.
- * David Iannelli, Senior Consultant, Coldwater Corporation
- * Steve Flores, Principal, Flores Greenberg Consulting Group
- * Marlowe Greenberg, Principal, Flores Greenberg Consulting Group

III. RESEARCH HIGHLIGHTS

A complete description and analysis of the market research is included in the attached report from the Coldwater Corporation. It provides the details on the findings from both the household survey and the focus groups.

(There are important demographic, income and occupational differences between the Metro Detroiters and those who graduated from a Detroit high school. These differences are described in the Coldwater Corporation report. But, on the specific research question of this study--pathways to good-paying jobs--there is a remarkable similarity between the two groups.)

Our focus in this section is on the broad themes that emerged from the research, particularly those themes that could influence the development of a career preparation system strategies.

There are four broad themes that emerge from talking with young adults without four-year degrees who have employment earnings of at least \$30,000 a year:

1. There is a dynamic labor market with lots of opportunities for young adults who do not have four-year degrees.
2. There is a great diversity in the pathways that people take to get to these good-paying occupations and careers.
3. Most of the pathways are centered on people's place of work, not education and training institutions.
4. The most important characteristics of the study participants are resourcefulness and perseverance, not academic or technical skills.

1. Dynamic Labor Market

In previous research Michigan Future presented data on the many good-paying occupations that were available that did not require a four-year degree. That research found that:

- 60% of the full-time workers in the Great Lakes States with employment earnings of at least \$30,000 per year do not have a four-year degree.
- Of 88 occupations with a median salary of at least \$30,000 a year, 47 do not require a four-year degree.

The results of this study offer evidence that these opportunities are even more plentiful. The two studies taken together should dispel the notion that the only pathway to good-paying jobs and careers is by getting a four-year degree. Quite simply, there are plentiful opportunities for good-paying careers available today for young adults without four-year degrees.

The young adults who participated in the study are in a wide variety of occupations. Far broader than the 47 good-paying occupations identified by Michigan Future in its past research.

Many believe that there are a limited number of highly technical occupations--such as the traditional skilled trades in manufacturing and construction and new information technology and health care occupations--which offer good-paying opportunities without a four year degree. Only 44% of the suburban and 17% of the Detroit study participants were in these technical occupations.

The research demonstrates that there are advancement opportunities in just about any occupation. (For a list of the occupations held by the study participants see Table 1 and Appendix A in the following report from the Coldwater Corporation.)

There are also robust career ladders available to these young adults. The best evidence of this is that 41% of the suburban and 25% of the Detroit participants had employment earnings of at least \$50,000. These ladders involve both more advanced frontline jobs and moving into supervisory positions.

The study participants have been promoted frequently and believe that there are more promotions in their future. They do not see the absence of a four-year degree as locking them into dead end jobs. The ladder may not be linear. Sometimes moving up involves a change in careers. But as they gain new skills and learn about new opportunities, the study participants have won promotions and believe they will get future promotions.

It is not surprising then that the study participants are quite satisfied with their jobs and careers. The broader community may see their jobs as low status, but these young adults like their work, have moved up the career ladder and see the opportunity for additional promotions. They paint a positive picture of the work world for those without four-year degrees.

2. Pathway Diversity

Study participants took a wide variety of pathways to their current jobs and careers. The notion that the pathway to good-paying frontline jobs is through a technical training program in high school, community college or apprenticeship program is not borne out by the study.

Maybe the most surprising finding in the study is the diversity of education that is exhibited by the participants. For Metro Detroiters, 41% have no formal education beyond high school and only 34% have an occupational license, credential or degree. For Detroit high school graduates, 36% stopped their formal education after high school and only 30% have an occupational license, credential or degree.

The absence of formal technical education did not influence earnings. Those participants with just a high school degree earned as much as those with some post-secondary education.

Unionization is also a minority pathway (28% for suburban and 41% for the Detroit participants) to these good-paying jobs. The notion that the only good-paying jobs for people without four-year degrees is by being a union member is not true

The dominant pathway of getting to these good paying jobs is ad hoc:

- graduate from high school
- maybe start at a college, but not get a degree

- get a lower-skilled job
- learn about promotion opportunities
- learn the skills needed to get the promotion
- repeat the advancement process

3. Centrality of Place of Work

For many of the study participants, the pathway to good-paying occupations is centered at their place of work. This was the dominant theme of the focus groups. People find out about promotion opportunities and learn new skills at work. If classroom training is required, the preferred location is at work.

When asked the most important place for learning skills required in your current occupation, skills you learned at work was far and away the most cited. Only 38% of Metro Detroiters and 33% of Detroiters indicate that their current job requires some type of training that the employer did not provide.

4. Resourcefulness and Perseverance

The dominant story of the market research is the resourcefulness and perseverance of these young adults. Their primary skill is in being able to identify promotion opportunities and then having the drive and ability to take advantage of those opportunities.

Moving up the career ladder is important to these young adults. They look for advancement opportunities and do what is necessary to win the promotion. If training is required, it is taken on a just-in-time basis--learning what you need for the promotion. They then start the process all over again--looking for the next advancement opportunity.

This resourcefulness seems to be far more important to career success for these young adults than specific technical skills.

5. Implications

As a reader, you may well be saying to yourself, these research findings are not all that surprising. Of course, people make career decisions in their 20s, rather than while they are in high school; and, yes, there are lots of people who have built good-paying careers without either a four-year degree or a technical specialization; and, yes, there are also lots of people who move up the career ladder at work without formal post-secondary training. In fact, most of us probably know people whose careers have followed this type of pathway.

What is important about this research is how effective this ad hoc pathway is--and the implications that should have for the design of career development strategies. Because no matter how familiar this nonlinear pathway is to us, the fact is that it has been virtually ignored in our current career preparation strategies--by policymakers, educators and employers.

IV. POLICY RECOMMENDATIONS

This study of career pathways offers some provocative information on how one might improve the effectiveness of the career preparation system in Michigan. A basic assumption of this study is that designing a system based on how people currently are succeeding has a greater chance of being effective, than designing a system based on a policy ideal.

Current efforts to improve the career preparation system are based on a fairly traditional linear model. It is centered around formal education and training institutions: Career exploration throughout the K-12 system, technical training beginning in high school, followed by community college, apprenticeship or some other technical training.

Michigan Future has been part of the effort to design such a system. In addition to our work to help people understand the wide variety of career opportunities, we have been involved in efforts to make technical training more widely available to high school students.

This study raises the possibility that there may be a different way of organizing a career preparation system. One that is far less linear and far less centered on education and training institutions. Also, one which emphasizes the development of resourcefulness skills first, rather than technical skills.

There are, at least, two ways of thinking about the policy implications of this study's findings:

The first would be to view it as additional evidence on the need to push for an overhaul of the career preparation system. The talented individuals represented by those who participated in this study could have found good-paying work much earlier in their careers, if only there had been a world-class technical training system to get connected to in high school.

The alternative interpretation is that a formal technical training system is likely to be attractive to only a relatively small number of non-college bound youths and their parents. That rather than trying to attract large numbers of students to a formal technical training system, either in high school or once they graduate, the focus should be on building a nonlinear, employer-centered system.

This study was not designed to provide evidence on which approach is likely to be more effective. The study does, however, raise questions about how many will participate in a formal technical training system--no matter how good it is

Clearly, if we could get more people involved in the formal technical training system, we would increase the pipeline of job seekers with the skills needed to take advantage of good-paying jobs and careers.

But most of the young adults currently in these jobs did not follow a traditional technical training pathway. And there is little evidence that there are increasing numbers who are pursuing that formal technical training route. In fact, community college enrollment--probably the best available indicator--is stagnant, at best.

So what would a system look like that was organized around the pathways followed by those who are successfully taking advantage of good-paying job opportunities? What strategies might be pursued that would entice more high school students and young adults

to follow in the footsteps of those who are succeeding today?

The chart below provides a comparison of two possible career preparation systems:

Technical Training System

K-12 career exploration
training institution centered
technical skills focused
technical degree focused
good-paying job after degree
lifelong learning

Nonlinear System

post-secondary career marketing
employer centered
foundation skills focused
just-in-time learning
good-paying job as promotion
lifelong learning

1. Attracting Job Seekers to Occupations and Careers

At Michigan Future we have come to believe that a prime cause for the shortages in these good-paying occupations is that too few people are interested in these careers. (For instance, if hardly anyone is interested in a career in manufacturing, the quality of the technical training system for manufacturing doesn't matter.)

An effective career preparation system must pay attention to both attracting people to occupations and careers, as well as providing the training needed to take advantage of those opportunities.

Most study participants (69% of Metro Detroiters and 66% of Detroiters) decided to pursue their current line of work between the ages of 19 and 30, as compared to 22% for both groups by the age of 18. (Few made a career decision after 30.)

They learned about their occupation largely from friends and family, not on the job or in school.

Michigan's current strategy to attract individuals to these good-paying frontline occupations is focused on K-12 students--particularly in high school. There are good reasons to continue to make career exploration available to every K-12 student. But there obviously are strong countervailing pressures on those students from parents, peers and educators to get a four-year degree.

If the study participants are typical of their colleagues, the best time to attract them to skilled, frontline occupations is in their 20s--after they have completed high school and have decided not to pursue four-year degrees.

There is a clear need to provide young adults with better career information as they make decisions about their careers. Career exploration is increasingly available to K-12 students, but there is no structured career information initiative for post-secondary job seekers. This study suggests that employers and training institutions should work together to provide

far better career information than is currently available to job seekers in their 20s, who are not enrolled in an university.

2. Career Preparation

The experiences of the study participants also suggest a whole different way of organizing career preparation. Most fundamentally, it would be a system centered around employers, rather than education and training institutions.

When asked the most important source of learning that led to being hired in their current line of work, "on the job" was the leader at 45% for Metro Detroiters and 36% for Detroiters. (If you add the military and union training programs to the on the job total, the figures jump to 53%/45%) This compares to 6%/13% in high school, 26%/19% in post-secondary training programs and 14%/21% self taught.

These responses are consistent with the findings of the focus groups. Those participants predominantly told a story of finding out about promotion opportunities and learning the needed skills for the promotion on the job.

The Horatio Alger story of someone rising from the mail room to become CEO may no longer be true. But these young adults tell a story of a ladder from entry-level work up to good-paying skilled frontline occupations. As they do well in their jobs, they learn additional skills that make them good candidates for more skilled and better-paying jobs.

The career preparation system we have been trying to build is based on a very different pathway. It is modeled after our system of preparing people for professional and managerial careers--mastering academic subjects in high school that prepare them to be successful at a university. The technical career equivalent that we are trying to build involves mastering academic subjects and beginning technical career preparation in high school that will lead to success at a community college, apprenticeship program or some other kind of technical training.

We know that this pathway is not well used today. Only 9% of the adults in Michigan today have a community college degree. Maybe more importantly, only 17% of the Metro Detroiters and 25% of the Detroit study participants have a community college degree--and these are people in the type of jobs that we think can best take advantage of an associates degree. (The community college degree, unfortunately, is the only available statistic on obtaining formal technical training.)

The research findings suggest that policymakers, educators and, most importantly, employers might want to think of an alternative--or parallel--system. One that would start with instilling a set of foundation skills in high school--so that when a young person decides not to pursue a four-year degree, he or she is able to perform well in an entry-level job and have the skills to identify and take advantage of advancement opportunities.

This approach conforms much more closely to the pathways that those who are in these skilled frontline jobs have followed. It also is a more agile system, which should be more responsive to the constant changes that characterize an Information Age labor market.

Michigan Future is a strong advocate for making technical training programs available to high school students. But, like everyone else in the field, we have experienced the difficulty of attracting parents and students to this pathway.

This study suggests that a higher priority might be educators and employers working together to develop the resourcefulness and perseverance characteristics that are so important in the success of the study participants.

If the most likely pathway to a good-paying career without a four-year degree is nonlinear, it suggests a set of non-technical foundation skills that are needed to succeed in the skilled frontline jobs of the future.

Those foundation skills would certainly include:

- basic academic skills
- a positive attitude and motivation towards work
- the ability to work in teams and to communicate with others
- the ability to identify advancement opportunities
- the ability to learn the skills needed to take advantage of those opportunities

If achieving this set of foundation skills were the goal for every high school graduate, the odds are that the curriculum offered in our high schools would be much different than today.

Building a nonlinear career preparation system would also involve centering much technical training in workplaces. Rather than leaving high school for some post-secondary technical training, a nonlinear system would involve leaving high school for a job, hopefully with an employer who had a career ladder program. One which made advancement opportunities available to all workers and provided the training needed for the advancement. (The training could be provided by the employer or sponsored by the employer, but delivered by a technical training institution.)

It would also view technical training as credential-based, rather than degree-based. Learning what was needed to succeed in the job would be the goal, not getting a degree. The assumption is that the worker would then begin the process all over again to take advantage of the next step up the career ladder.

The key to making this type of nonlinear system work is the leadership of employers. This system cannot work if it is education institution centered. Employers need to start thinking about the new hire in the mail room as their next skilled frontline worker, rather than as someone without the skills to move up. And policymakers should consider providing incentives to employers to develop this kind of training system.

The people who are succeeding in skilled frontline jobs, by and large, have not entered the workforce with technical skills credentials. They have developed those skills while they worked, sometimes simply on the job, sometimes by taking more formal training. Building a career preparation system around this pathway seems to be a promising strategy for better connecting young adults to available good-paying occupations.

V. NEXT STEPS

Clearly efforts are going to continue to strengthen Michigan's technical training system. Michigan Future will continue to contribute to these initiatives.

But we also hope this report will spur some efforts to build a nonlinear system. Rather, than choose one model over the other, it appears that a comprehensive career preparation system would work best if it recognizes that there are multiple pathways to good-paying frontline occupations.

There are three priority areas for innovation and experimentation. In each government and foundations should provide incentives for employers and educators to innovate.

1. Foundation Skills Development

The foundation skills outlined on page 10 seem to be critical to the ability of young adults to take advantage of the good-paying opportunities being created by our growing and changing economy. This research suggests a need for the development of a curriculum designed to instill these skills in Michigan's K-12 students.

Educators report that efforts to include soft skills--which are at the heart of the recommended foundation skills--in the curriculum are being crowded out by the emphasis on academic skills in standardized tests and college entrance exams. Add to that the priority placed on providing technical training opportunities in school-to-work programs, make it unlikely that the current system can accommodate a foundation skills orientation.

At the very least, we need to stimulate a dialogue between parents, educators and employers about the skills we expect students to have when they leave high school.

2. Career Marketing for Young Adults

This research suggests that most people make decisions about careers in their 20s. So there is a need to provide far better information about the many available career opportunities to this target audience--particularly those who have decided not to pursue a four-year degree.

Employers are the logical leaders of this effort. Both because they need the workers and also they have, by far, the best information about current and future occupation and career opportunities.

It is clear that efforts to develop a career preparation system will not work unless we can do a far better job of getting young adults to consider these frontline occupations as career possibilities.

The Detroit Regional Chamber has begun work on a career marketing system. They have decided to target young adults who have graduated from high school, but are not enrolled in college. Their preliminary plans are to develop a virtual career fair--where individuals can learn about these careers at a web site, with the information being provided by employers and technical training institutions.

Only time will tell whether this is a good way to communicate career information, but it is the type of innovation that is worthy of broad community support. Funders should encourage

the Chamber and others to develop new ideas on how we can better attract young adults to good-paying frontline occupations.

3. Nonlinear Preparation

Employers need to take the lead in the development of career pathways that are work-based. This study suggests that this has the potential of being a major part of the solution to the shortage of skilled workers

The challenge is to design a system that encourages more individuals to follow the pathway that has proven so effective for our study participants.

One approach that we think may have some promise is to try to connect college dropouts to employers with career ladder programs. About 50% of those who enter a university do not get a degree. Between the ages of 25-34, Michigan Future found in its study of occupational wages, college dropouts earn far less than those with either a two year or four-year degree. So young adults could benefit from a system that would better connect them to good-paying occupations.

The initiative would involve identifying a cooperating university who would help identify dropouts or those at-risk of dropping out. These young adults would be recruited to work in entry-level jobs with participating employers. The employers would offer a formal up-the-ladder program that would provide these college dropouts with a real opportunity to quickly obtain good-paying employment.

Just like with the Detroit Regional Chamber's virtual career fair idea, this might not be the best way to implement a nonlinear career preparation pathway. But it is the kind of innovation that should be encouraged.

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PATHWAYS TO GOOD-PAYING JOBS

Final Research Report

*Research Conducted for
Michigan Future, Inc.*

*Funded by
The Hudson-Webber Foundation*

Fall 1998-Summer 1999

I. INTRODUCTION

A. BACKGROUND

The Michigan economy faces a troubling shortage of skilled workers. The problem is not a lack of workers, but a lack of workers with the necessary skills to fill available positions. The overall goal of this project is to develop a set of policy recommendations for Michigan Future to present as part of a solution to the skills gap to the State of Michigan. Working with the Hudson-Webber Foundation, Michigan Future contracted with Coldwater Corporation to conduct the research that would help guide these policy recommendations.

B. RESEARCH OBJECTIVES

In general, the research was designed to explore the various pathways people in Metropolitan Detroit who do not have a four-year college degree, have taken to find good-paying occupations. Coldwater Corporation embarked on a three-stage research program, the first stage being qualitative research or focus groups. The second stage was a telephone survey of people living in Metro Detroit, but outside of the City of Detroit. The third stage was a telephone survey of people who graduated from a City of Detroit high school.

In addition to the general goals outlined above, the specific objectives of the research were as follows:

- Identify the various types of good-paying jobs for which people have been hired without a four-year college degree;
- Determine when people originally became interested in and how they learned about their current occupations;
- Identify what specific skills they have that make them marketable in their line of work and what training they have received;
- Investigate how and where they learned the skills they use in their job and what education or training they received or was required;
- Explore the path they have taken to their current occupation;

II. METHODOLOGY

A. FOCUS GROUP DESIGN

Coldwater Corporation conducted two (2) focus groups among residents of the Metropolitan Detroit area at 6:00 and 8:00 p.m. Wednesday, September 30, 1998. In general, the research was conducted with residents no older than 39 years of age, who have at least a high school degree, but less than a four-year college degree, and who have a personal employment income of \$25,000 a year or more (\$30,000 in the 8:00 p.m. group).

Two additional stipulations were placed on the 6:00 p.m. group. First, they were to have graduated from a high school within the city limits of Detroit. We did not require them to have attended a public school, but no private or parochial school graduates were recruited. Also, the 6:00 group was comprised entirely of African Americans. This was necessary because of the need to design policies for Detroit residents. Following is a comprehensive list of the recruiting criteria:

- Between the ages of 18 and 39
- Personal income of at least \$25,000 annually
- High school graduates with less than a four-year college degree
- Employee rather than entrepreneur
- Union members comprise no more than half the group
- African-American (6:00 p.m. group only)
- Detroit high school graduates (6:00 p.m. group only)
- Graduates of high school in Tri-County area (8:00 p.m. group only)

B. SURVEY DESIGN – METRO DETROIT

Coldwater Corporation interviewed one hundred thirty-seven (n = 137) adults in the area outside the City of Detroit March 4-17, 1999. The interviews were administered to respondents from a listed sample of heads of households 25-39 years of age with a household income of \$45,000 or more in the following selected municipalities outside the City of Detroit: Ecorse, Ferndale, Inkster, Oak Park, Redford, River Rouge, Southfield, Pontiac, Highland Park, Dearborn, Hazel Park, Livonia, Madison Heights, Romulus, Sterling Heights, Taylor, Warren, and Westland. These communities were chosen as the municipalities surrounding Detroit likely to have the highest incidence of people matching our desired criteria and characteristics as listed below. The \$45,000 household income level was

chosen because it was deemed to be the closest available threshold that would generate at least one respondent making \$30,000 or greater individually.

Coldwater Corporation conducted one hundred sixty-four (n=164) interviews, August 16-29, 1999 with adults who graduated from a high school within the city limits of Detroit. The interviews were administered to respondents from a listed sample of heads of households 25-39 years of age with a household income of \$45,000 or more in the Detroit Metropolitan Statistical Area (MSA). Because over 90% of graduates of Detroit high schools for the age group in question are African American, interviews were focused in areas statistically identified as high-density African American neighborhoods.

While the sample for both surveys included household heads age 25-39, anyone in the household 18-39 was eligible to participate in the survey if they met the other criteria. Both sets of respondents met the following criteria:

- Between the ages of 18 and 39
- Personal income of at least \$30,000 annually
- High school graduates with less than a four-year college degree
- Union members comprise no more than half the group

There are limits associated with this research. First, the primary focus of the research was the pathways these people followed to get good-paying jobs. It is their stories that are of interest to us more than any quantitative data we might have collected. Second, the target group for this survey is small and therefore costly to acquire. Ideally, we would have dialed randomly into the Detroit area to acquire the respondents in our survey. Given their low incidence, we pursued alternate approaches that would increase the incidence of the target group in our samples. Essentially, we narrowed our universe. Because we did not employ an RDD (random digit dial) approach to acquire respondents, we cannot comment on the actual proportion of people in Metropolitan Detroit who meet our criteria.

III. DETAILED SUMMARY OF FINDINGS

A. OVERVIEW

Good-paying jobs exist for both Metro Detroiters and Detroit high school graduates who do not have a four-year college degree, and their pathways to success are more similar than they are different. Both groups initially learn about careers and later about job opportunities in much the same way – by word-of-mouth. Only minority proportions of either group of workers says their jobs required prior technical training or a special license, degree, or credentials. Both groups say that they learned the skills most important to their careers either on-the-job or taught themselves. There are, however, important differences between the two groups. The career path for Detroit high school graduates is more ad-hoc than it is for Metro Detroiters and the fewer technical jobs (technicians and precision production, crafts, and repair) and wider variety of jobs held among Detroit high school graduates is a reflection of that.

While pathways for the two groups are more similar than they are different, household and personal characteristics differ greatly. Men outnumber women by three-to-one in the Metro Detroit sample, while Detroit high school graduates divide evenly between the two. Detroit high school graduates have more education than Metro Detroiters do, but in spite of their educational attainment; they have much lower personal incomes. Further evidence of their differing economic situations can be found in the fact that while Detroit high school graduates are more likely to be single, yet more likely to have children in the home.

B. GOOD-PAYING JOBS

Metro Detroiters and Detroit High school graduates, who have less than a four-year college degree, work in a wide variety of good-paying jobs. Table 1 lists the various categories into which those jobs fall. While both groups are employed in a variety of occupations, there are large differences between the types of jobs in which Metro Detroiters and Detroit High school graduates are employed.

Metro Detroiters in technical jobs as technicians or in jobs focusing on precision production, crafts, and repair outnumber Detroit high school graduates in technical jobs 44%-17%. Detroit high school graduates are more likely to work in a factory setting, as their higher union membership rates suggest, and in administrative office jobs. Detroit high school graduates outnumber Metro Detroiters by more than two-to-one in jobs as machine operators, assemblers, and inspectors (21%-9%), and in jobs in administrative services, business and office (30%-12%). This drives the higher proportion of men in the Metro Detroit sample as they are more likely to hold technical jobs.

TABLE 1
Occupation Categories

	Metro Detroit %	Detroit HS %
Administrative services	5	9
Business and Office	7	21
Facility maintenance	3	1
Personal services	2	6
Machine operators, assemblers, and inspectors	9	21
Managers and owners	18	10
Police/Fire	1	4
Precision production, crafts, and repair	20	8
Sales	6	3
Technicians	24	9
Transportation (drivers)	4	2
Miscellaneous	1	7

C. SATISFACTION WITH JOB MARKET

In addition to working in a wide variety of good-paying jobs, Metro Detroiters and Detroit high school graduates with less than a four-year college degree say they are satisfied overall with their job and their career outlook. Detroit high school graduates, however, indicate lower levels of overall job market satisfaction compared to Metro Detroiters. Specifically, the intensity of their satisfaction lags behind Metro Detroiters; that is Detroit high school graduates are less likely to say they are “very” satisfied.

Overall, Metro Detroiters and Detroit high school graduates are satisfied with their current job. An encouraging 60% of Metro Detroiters say they are *very* satisfied with their *current job* and an additional 34% say they are somewhat satisfied, while job satisfaction among Detroit high school graduates is equally divided between those who are very satisfied (45%) and somewhat satisfied (43%).

Job security is not a major concern among either Metro Detroiters or Detroit high school graduates. Nine of ten (89%) Metro Detroiters say they are either very satisfied (59%) or somewhat satisfied (30%) with their *job security*. Similarly, 85% of Detroit high school graduates are satisfied with their job security, with about half (48%) indicating they are very satisfied and 37% somewhat satisfied.

In general, Metro Detroiters and Detroit high school graduates have a favorable outlook on opportunities for career advancement. An impressive 81% of Metro Detroiters and 74% of Detroit high school graduates say they are satisfied with

opportunities for career advancement, the proportion who say they are very satisfied (42% Metro Detroiters and 40% Detroit high school graduates) is lower than in questions about job satisfaction and job security.

- One explanation for a strong outlook on career advancement opportunities is likelihood for promotion. About the same proportion of Metro Detroiters (79%) and Detroit high school graduates (75%) saying that it is possible for them to get promoted in their current line of work without a four-year college degree.

Detroit high school graduates offer more tempered satisfaction ratings on job opportunities in their local areas compared to Metro Detroiters. Overall, Metro Detroiters are satisfied with the job market as 82% say they are very (48%) or somewhat (34%) satisfied with the *job opportunities in their local area*. However, Detroit high school graduates indicate much lower levels of satisfaction with job opportunities in their local area (62% overall). About one-third are very satisfied (30%), one-third are somewhat satisfied (32%), and another third are either somewhat or very dissatisfied (26%) with job opportunities in their local area.

The focus groups also revealed a positive and optimistic workforce. Participants in both groups agreed in September of 1998 that the Michigan economy is strong and will continue to be strong at least in the near future. They also believe jobs and career opportunities are plentiful, and their mobility was evidence of that.

D. PATHWAYS TO GOOD-PAYING JOBS

The path Metro Detroiters and Detroit high school graduates take to their good-paying jobs resembles the path one would take up a climbing wall rather than one would take up a ladder. Their career path has no regularly spaced job rungs. Instead, like rock climbing, advancement is a more ad-hoc path upward, moving laterally, if necessary to get a better foothold before moving up. The two most important skills that can be directly attributed to these individuals success are perseverance and resourcefulness. Along the pathway to success they have acquired the necessary knowledge and skills either by teaching themselves, learning it on the job, or by pursuing outside training.

In the focus groups, African-Americans tended to describe a more ad-hoc career experience than did white suburbanites, whose career paths tended to follow more of a straight line. Most in the African-American group took their first job because it was what they could get at the time and then built on their career by taking advantage of opportunities in fields related to or unrelated to the work they were doing at the present time.

They are familiar with and able to handle dislocation and have been more mobile than non-blacks. Their ability to advance in this manner reflects a resourcefulness and perseverance that is central to their success. Not only have they developed the ability to identify an opportunity, they have the ability to take advantage of it as well. White suburbanites also exhibit resourcefulness, but tended to work in the same field doing much the same work as when they began working.

1. *Timing*

The path Detroit high school graduates have taken to their good-paying job starts out a bit slower than Metro Detroiters have. Metro Detroiters are more likely than Detroit high school graduates to have made their decision about pursuing a profession in their early-to-mid 20's and also are more likely to take their first job in their current line of work or profession in their early-to-mid 20's.

Nearly three times as many Detroit high school graduates as Metro Detroiters reported deciding on a career path after age 30 (13% vs. 5%). A 55% majority of Metro Detroiters say they decided by age 22 to pursue the work they are in now, compared to only 44% of Detroit high school graduates.

The time most Metro Detroiters and Detroit high school graduates decided on their career direction is also about the same time they say they took their first job in their current line of work. The same proportion of Detroit high school graduates who began to pursue a professional career in their current line of work before age 22 (44%) also started their first job in their current line of work or profession before age 22 (44%). This finding is the same for Detroit high school graduates who began pursuing their professional careers between the ages of 23 and 30 as they also started their first job at the same time.

- A 52% majority of Metro Detroiters took the first job in their current line of work by age 22, and 78% took their first job in the field by age 26. The mean age at which people took their first job in their current line of work is 23. Given that the average age of the respondents in the survey is 34, the average respondent, therefore, has been in his or her job for 11 years.

- Among Detroit high school graduates, 44% took their first job in their current line of work by age 22. Given that the average age of Detroit high school graduates is 33 and they took their first job at 24, the average Detroit worker has been in his or her job for two years less than Metro workers (9 years) have.

Like Metro Detroiters, most Detroit high school graduates say they made a decision to pursue their current line of work as a profession at or about the same time they took their first job in their current line of work or profession.

In the focus groups, we found the timing for career socialization was somewhat later for African Americans than it was for non-blacks. Asked when they were first exposed to what they currently do to make a living, most African-Americans stated ages 5-10 years older than non-blacks. Also, asked when they decided to pursue a particular line of work, most non-blacks said 18-20 years of age, while African Americans volunteered ages in the mid to late 20's.

2. *Information*

Metro Detroiters and Detroit high school graduates learn about various careers and job opportunities in similar ways. Both groups rely on informal rather than formal institutional job search networks. A majority say they learned about either their occupation or profession and current job from a family member, friend or neighbor. On the job and school are the second most popular sources for learning about careers and current jobs.

Metro Detroiters learn about careers and job opportunities in general by word-of-mouth rather than any formal institutional job search network. Asked to volunteer how or where they learned about their occupation or profession, a 42% plurality mention a family member (20%) or a friend or neighbor (25%). Another 21% volunteer that they heard about the occupation on the job and 24% say they learned about it through school.

- Metro Detroiters say they learned about their current job in much the same way as they learned about their occupation or profession. Half (50%) say they learned about their current job by word-of-mouth. Another 16% indicate they learned about it through the media, and 11% say from an employer. Only 5% cite an educational institution or a technical training program (2%).

Similar to Metro Detroiters, most Detroit high school graduates learn about their occupation or profession by word of mouth and often use informal networks of people they know on a personal level. More than one-third (38%) of Detroit high school graduates volunteer that they learned about their occupation or profession

from a family member (16%), or from friends or neighbors (20%). Additional sources are school (18%) and on the job (18%), however these sources are less likely to be mentioned by Detroit high school graduates than Metro Detroiters. Detroit high school graduates are more likely to indicate some other source for information about their occupation or profession.

- Like Metro Detroiters, Detroit high school graduates say they learned about their current jobs by word-of-mouth (50%) while 17% say the media. Detroit high school graduates are slightly less likely to hear about their current job through an employer than are Metro Detroiters (6% vs. 10%), and more likely through a temporary agency (8% vs. 4%). Only one-in-ten say they heard about their current job from an educational institution (5%) or a technical training program (5%).

Families played an important role in career decisions for people in both focus groups, but somewhat differently for each group. For many people in the white suburbanite group, family members exposed them to the line of work they eventually chose. In some cases, parents or siblings served as career models. African-Americans learned about job openings and got a foot in the door as a result of members of their family or extended family. They also learned skills from family members. The key difference between the two groups is the *continued* importance of family networking among African-Americans in subsequent jobs, while white suburbanites tend to rely more on non-family sources of career information.

3. *Technical Skills and Licensing Requirements*

The good-paying jobs people found do not necessarily require technical skills and training outside of employer-provided training. In fact, when asked which one of seven sources of training was most important to their being hired into their current job, nearly half of Metro Detroiters and more than one-third of Detroit high school graduates cite skills they learned working at their current or previous employer.

In the focus groups, the only theme to job training experiences for these participants is that there is no theme. People received training from a variety of different sources. Some people found jobs that utilized skills they learned in high school, some were self-taught, and some received informal on-the-job training from co-workers. Others received formal training from their employer, while still others gained skills through courses at a community college. Definitions of job training ranged from two-year degree programs to learning specific skills such as how to use a new piece of software.

Technical Skills. The majority of respondents, 66% of Detroit high school graduates and 62% of Metro Detroiters say they did not need any technical skills not provided by the employer to qualify for their job. On the other hand, over one-third of Metro Detroiters (38%) and about one-third of Detroit high school graduates (33%) say additional technical skills or technical training were required.

- Asked what those skills were, 62% of Metro Detroiters say additional technical skills or technical training were required, voluntarily name a specific technical skill such as computer skills, drafting, electronics or fabricating to name a few. The skills people mention most frequently as additional skills needed include computer skills (19%), math skills (12%), and mechanical skills in general (9%).
- The additional skills Detroit high school graduates mention most often include basic computer skills and knowledge of software or programs (22%). Other skills mentioned frequently are medical background (9%), communication skills (6%), obtaining a license (6%), and math skills (5%).

License, Credentials, Degree. One-third (34%) of Metro Detroiters say their job requires a special license, credentials, or degree, while 65% say their current job does not have any such requirements. These are not necessarily the same people who say they needed technical skills not provided by the employer to qualify for the job. Somewhat fewer Detroit high school graduates say their jobs requires a special license, credentials, or degree (30%), while the majority (69%) say their current job does not have any such requirements.

Among respondents who say their job requires a special license, credentials, or degree, nearly 40% of Metro Detroiters and 24% of Detroit high school graduates say the knowledge or skills necessary were learned on the job – either through a previous job (13% vs. 17%), a current job (11% vs. 5%), or on the job in general (13% vs. 2%).

Another 26% of Metro Detroiters and 23% of Detroit high school graduates with special credentials say they learned the necessary skills for the credential at college, community college, or mention a specific post-secondary education institution including Macomb Community College, Henry Ford Community College, Wayne State University, and Lawrence Technological Institute.

Several Detroit high school graduates (14%) say they attended trade or career school in general or listed a specific trade or career school such as Real estate school, Michigan Barber College, or the National Institute of Technology. Additionally, 9% of Detroit high school graduates stated they received the necessary credentials for the job through training classes, industry seminars or courses, while 6% received them through the State of Michigan or government.

Continuing Education. In keeping with the resourceful nature of these groups of individuals, one-third of Metro Detroiters (34%) and more than one-quarter (27%) of Detroit high school graduates indicate they are currently pursuing technical training related to their current line of work.

Asked where they are doing that training, many Metro Detroiters and Detroit high school graduates name specific institutions, others say they are learning on the job, and others say they are teaching themselves on their own time. One of the most interesting findings is the variety of different places people are going for training.

- While 12 of the 55 Metro Detroiters pursuing training are teaching themselves, others are attending community colleges (Henry Ford, Macomb, Oakland, or Washtenaw), Schoolcraft Center, Central Michigan, Michigan Tech, attending seminars, or training at work to name only a few.
- Detroit high school graduates list several four-year institutions or community colleges they are attending such as Wayne State University, Marygrove College, or Wayne Community College, or attending industry training or seminars.

4. *Importance of Various Training Sources*

Workers say the skills they learned on the job or taught themselves have been most important to their career. We asked respondents which one of seven potential sources of training was most important to their career. Both Metro Detroiters and Detroit high school graduates say *skills they learned while working at their current or previous employer* and *job-related technical skills they taught themselves* are the most important skills. Both groups also rate each of these items individually as more important than the other five items tested.

Of all the skills resources tested, Metro Detroit workers and Detroit high school graduates say the skills they learned working at their current or previous employer are the most important to their being hired into their current line of work. Asked which one of the seven skills resources tested was the most important, nearly half of Metro Detroiters (45%) say on-the-job training, nearly three times the proportion who choose any other source. Compared to Metro Detroiters, slightly fewer Detroit High school graduates say on-the-job training was most important (36%).

- Detroit high school graduates are more likely than Metro Detroiters are to say that skills learned in high school (13% vs. 6%) and skills they taught themselves (21% vs. 14%) were important to being hired into their current line of work.

- A total of 26% of Metro Detroiters and 19% of Detroit high school graduates choose training through some educational institution beyond high school such as community college (12% vs. 9%), or a technical training program after high school (14% vs. 10%).
- Only 8% of Metro Detroiters and 9% of Detroit high school graduates choose either military training (5% vs. 6%) or union training (3% vs. 3%).

We also asked people to rate each potential source of training individually. People rate skills they learned on-the-job and technical skills they taught themselves as more important than skills they learned in school, through the military or from a union. Overall, 92% of Metro Detroiters say the skills they learned working at their current or previous employer have been either very important (77%) or somewhat important (17%) to their career. A 93% majority also say job-related skills they taught themselves have been either very important (63%) or somewhat important (31%).

Compared to Metro Detroiters, fewer Detroit high school graduates overall (85%) say the skills they learned working at their current or previous employer have been either very important (66%) or somewhat important (19%). The same proportion of Detroit high school graduates (84%) also say the job-related technical skills they taught themselves are important.

Half the Metro Detroit workers say they learned important skills through different educational institutions and the skills they learned after high school seem to be more important than what they learned in high school. Unlike Metro Detroiters, the majority of Detroit high school graduates say the job-related technical skills they learned in high school were just as important as any technical training they received after high school and less important than any training they received at a community college.

Those who did receive training at a community college find it useful. Of the 57% Metro Detroiters who received training, 88% say it was very or somewhat important, accounting for 50% of all respondents. Similarly, 81% of the 54% of Detroit high school graduates who received training say it was very or somewhat important (44% of total).

People who received training through a technical training program after high school say it was important. An 84% majority of Metro Detroiters say the training was important (51% of all respondents). Similarly, 86% of the 69% of Detroit high school graduates who received training say it was very or somewhat important (59% of total).

More people learned job-related technical skills in high school, but fewer say it was important. Of the 77% of Metro Detroiters who say they learned such skills in high school 65% say they were important (50% of all respondents) and only 26% say they were very important. Compared to Metro Detroiters, more Detroit high school graduates find the skills they learned in high school important. A majority (74%) of the 84% Detroit High School students who learned job-related skills in high school, find those skills important (59% of total).

Union training programs are more commonly experienced among Detroit high school graduates than among Metro Detroiters (25% vs. 33%). Consequently Detroit high school graduates rate union training as more important for their careers than do Metro Detroiters. About one-quarter (22%) of Detroit high school graduates say the union training program was important to their career, compared to 14% among Metro Detroiters.

Focus group participants exhibited mixed attitudes toward formal educational training after high school. In both groups people placed a great deal of emphasis on skills they acquired on-the-job and question the abilities of those with a four-year college degree. Most of the participants, however, have at least some college training and view college as a priority and goal for their own children. They were amused rather than defensive when they realized the inconsistency of their statements.

E. PROFILE OF RESPONDENTS

The target group for this research is people age 18-39, who personally have an income of at least \$30,000 a year, have graduated from high school, but do not have a four-year college degree. Table 1 profiles the survey respondents demographically to provide a sense of whom has been successful and achieved a \$30,000 income without a four-year college degree. Included primarily for descriptive purposes, the results in the table offer interesting insights into this population.

Significant demographic differences exist between these two groups. Screening questions were used at the beginning of the survey to target the specific education, income, age, and geographic characteristics mentioned above. Other demographic characteristics, however, simply are the result of random sampling. Differences in gender mix, income distribution, marital status, and educational attainment reflect real and meaningful differences between the two groups. For example, the larger proportion of men in the Metro Detroit sample flows from the fact that more people in that sample hold a technical job and men are more likely to hold technical jobs.

Following are some highlights about those who have landed good-paying jobs with less than a four-year college degree:

Men comprise a larger proportion of the Metro Detroit group than the Detroit high school group. This reflects two things. First, more people in the Metro Detroit sample hold technical jobs and men are more likely to hold technical jobs. Second, black women have a higher labor force participation rate than do white women. Given the middle-class composition of both samples, however, the effect of higher labor force participation rates is more muted and less important than who holds the technical jobs. More than three-quarters of Metro Detroiters (76%) are men compared to 51% of the Detroit group.

While both groups should be considered successful, Detroit high school graduates are less so than the Metro Detroit group, who make a significantly better living than the threshold income of \$30,000 set for a "good-paying job." While 23% make \$30,000-\$39,999 another 25% make \$40,000-\$49,999, and 41% make \$50,000 or more. On the other hand, nearly half (46%) of Detroit high school graduates make only \$30,000-\$39,999. In addition, single Detroit high school graduates outnumber single Metro Detroiters by nearly three-to-one, but Detroit high school graduates are more likely to have children under 18 living in the household.

Most of those who have found good-paying jobs without a four-year degree are over 30 years of age. Among Metro Detroit respondents, an overwhelming 83% say they are 30 years of age or older with more than half (50%) saying they are 35 years of age or older. Nearly three-quarters of Detroit high school graduates (75%) are 30 years of age or older.

Metro Detroiters have found good-paying jobs both with and without training after high school. Detroit high school graduates, however, have higher levels of educational attainment, but lower income. Four-in-ten Metro Detroiters in good paying jobs say they received no more than a high school degree, compared to 36% of Detroit high school graduates. A 61% majority of Detroit high school graduates have either some college or have received a two-year degree, while that is true of 48% of Metro Detroiters.

There is no indication in the data that the level of education that either Metro Detroiters or Detroit high school graduates have attained has any significant relationship to their current income. A correlation analysis of education and income reveals that the difference between a high school degree and further training (a two year degree at most) has no significant relationship to an individual's income level.

Good-paying jobs do not necessarily require union membership. Detroit high school graduates are more likely to be members of a labor union than are Metro Detroiters, but in neither group does union membership exceed fifty percent. Only 28% of Metro Detroiters say they are union members, while union members comprise 41% of Detroit high school graduates.

TABLE 2
Profile of Survey Respondents

	Metro Detroit	Detroit High School
Total	100	100
Gender		
Men	76	51
Women	24	49
Age		
Under 25	2	10
25-29	15	15
30-34	33	30
35 and over	50	45
Education		
High school graduate	41	36
Vocational/Technical	10	3
Some college – no degree	31	36
2-year degree	17	25
Income		
\$30,000-\$39,999	23	46
\$40,000-\$49,999	25	23
\$50,000-\$59,999	17	15
\$60,000-\$69,999	13	4
Over \$75,000	11	6
Refused	11	8
Union Member		
Union	28	41
Non-union	72	59
Marital Status		
Single	15	38
Married	80	49
Separated/divorced	5	9
Children Under 18 years of age		
Yes	71	77
No	29	20

IV. CONCLUSIONS

- ❖ The path to success for most respondents is an ad-hoc one, both from the standpoint of information gathering and advancement.
- ❖ Resourcefulness is a characteristic integral to the success of people who are under 40 years of age and have attained less than a four-year college degree. To follow the ad-hoc path these people have followed, one must be able identify and take advantage of opportunities as they come their way.
- ❖ Despite living and working in a society that places so much importance on a four-year college degree for success, these people have found satisfaction and success without a degree and are relatively optimistic about their future.
- ❖ The skills and training that people say has been most important to their career is on-the-job training and skills they taught themselves. This is true of both focus group participants and survey respondents.
- ❖ While people claim that the most valuable training has been either on-the-job or self-taught, people also have acquired training from a variety of training centers, community colleges, and other educational centers.

APPENDIX A

Pathways to Good Paying Jobs

Question Results

N=137 Metro-Detroiters

N=164 Detroit High School Graduates

AA. What is your age?

	Metro Detroit	Detroit HS Grads
Under 25	2	10
25-29	15	15
30-34	33	30
35 and over	50	45
Mean	34	33
Median	34	34
Range	21-39	18-39

BB. What is the last grade of school you completed?

	Metro Detroit	Detroit HS Grads
High school graduate	41	36
Vocational/Technical	10	3
Some college – no degree	31	36
2 year degree	17	25

FF. Are you a member of a labor union?

	Metro Detroit	Detroit HS Grads
Yes	28	41
No	72	59

Now I'd like to ask you some questions about employment and job training...

For each of the following, please tell me whether you are very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied.

	Satisfied			Dissatisfied		Collapsed	
	Very	Somewhat	NEITHER	Somewhat	Very	Satisfied	Dissatisfied
Q1. Your current job							
Metro Detroit	60	34	--	5	1	94	6
Detroit HS Grads	45	43	1	7	4	88	10
Q2. Your job security							
Metro Detroit	59	30	2	6	3	89	9
Detroit HS Grads	48	37	1	9	6	85	15
Q3. Your opportunities for career advancement							
Metro Detroit	42	39	3	7	8	81	15
Detroit HS Grads	40	35	2	12	10	75	22
Q4. Job opportunities in your local area							
Metro Detroit	48	34	2	8	1	82	9
Detroit HS Grads	30	32	2	12	14	62	26

Q5 [OPEN END] You said earlier that you are currently employed. What is your occupation?

	Metro Detroit %	Detroit HS %
Administrative services	5	9
Business and Office	7	21
Facility maintenance	3	1
Personal services	2	6
Machine operators, assemblers, and inspectors	9	21
Managers and owners	18	10
Police/Fire	1	4
Precision production, crafts, and repair	20	8
Sales	6	3
Technicians	24	9
Transportation (drivers)	4	2
Miscellaneous	1	7

Now I'd like to ask you a few questions about how you started in your line of work...

Q6 (PRE-CODED OPEN END) First, how did you hear about your current job?

	Metro Detroit	Detroit HS Grads
Employer	11	5
Internet	2	--
Media	16	17
Word of mouth	50	50
Educational institution	5	5
Technical training program	2	5
Temporary agency	3	8
Union	1	1
Other	11	8

Q7 How old were you when you decided to pursue your current line of work as a profession? (ASKED AS OPEN END, USE GROUPS AS NEEDED)

	Metro Detroit	Detroit HS Grads
Under 18	24	18
19-22	31	26
23-26	24	24
27-30	15	18
31-34	4	10
35 and over	1	3

Q8 At what age did you take your first job in your current line of work or profession?

	Metro Detroit	Detroit HS Grads
Under 19	22	22
19-22	30	22
23-26	26	29
27-30	13	15
31-34	8	9
35 and over	1	2
Mean	23	24
Median	22	24
Range	15-35	15-38

Q9 How or where did you learn about your current occupation or profession? That is, how did you first become aware of it in general? (ASK AS OPEN END)

	Metro Detroit	Detroit HS Grads
Family member	20	16
Friend/neighbor	25	20
School	24	18
Hobby	2	4
On the job	21	18
Other	9	15
Don't know	4	7

Q10 In order to qualify for your job, were there any technical skills you needed that required some type of training that the employer did not provide?

	Metro Detroit	Detroit HS Grads
Yes	38	33
No	62	66
Don't know	--	1

Q10a [OPEN END] What were those skills?

See Appendix B for verbatim responses

Q11 Does your job require any special license, credentials, or degree that you have received?

	Metro Detroit	Detroit HS Grads
Yes	34	30
No	65	69
Don't know	1	1

Q11a [OPEN END] Where did you gain the knowledge or skills you needed to get that (license, credentials, or degree)?

See Appendix B for verbatim responses

Q12 Are you currently pursuing technical training related to your current line of work?

	Metro Detroit	Detroit HS Grads
Yes	35	26
No	65	74

Q13 [OPEN END] Where are you doing that training?

See Appendix B for verbatim responses

Q14 [OPEN END] What are the one or two technical skills that have helped you the most in your career?

See Appendix B for verbatim responses

For each of the following, please tell me how important it was to your career – very important, somewhat important, not very important, or not at all important? If it doesn't apply to you, just say so.

(RANDOMIZE Q15-21)

	Important					Collapsed	
	<i>Very</i>	<i>Somewhat</i>	<i>NOT VERY</i>	<i>Not at all</i>	<i>NA</i>	<i>Important</i>	<i>Not important</i>
Q15 Job-related technical skills you learned in high school							
Metro Detroit	20	31	13	14	22	50	27
Detroit HS Grads	33	26	6	19	17	59	25
Q16 Job-related technical skills you taught yourself							
Metro Detroit	63	31	2	1	4	93	3
Detroit HS Grads	65	19	4	4	6	84	10
Q17 Training you received at a community college							
Metro Detroit	30	22	4	3	41	50	7
Detroit HS Grads	29	15	4	6	48	44	10
Q18 Training you received through a technical training program after high school							
Metro Detroit	30	22	7	4	37	51	10
Detroit HS Grads	41	18	4	6	30	59	10
Q19 Skills you learned working at your current or previous employer							
Metro Detroit	77	17	2	2	3	92	3
Detroit HS Grads	66	19	4	4	8	85	8
Q20 Training you received in the military							
Metro Detroit	7	2	2	6	84	8	6
Detroit HS Grads	6	4	1	1	88	10	2
Q21 Union training program							
Metro Detroit	10	5	2	11	72	14	11
Detroit HS Grads	15	7	4	7	67	22	11

Q22 I'm going to read through this list again and please tell me which ONE was the MOST important to your being hired into your current line of work.

	Metro Detroit	Detroit HS Grads
Skills you learned in high school	6	13
Skills you taught yourself	14	21
Training you received at a community college	12	9
Training you received through a technical training program after high school	14	10
Skills you learned working at your current or previous employer	45	36
Training you received in the military	5	6
Union training program	3	3
Don't know/Refused	2	3

Q23 In your current line of work, have you been promoted, or is it possible for you to be promoted, without a four-year college degree?

	Metro Detroit	Detroit HS Grads
Yes	79	75
No	20	21
Don't know	2	4

The last few questions are for statistical purposes only.

D1 What year did you graduate from high school?

	Metro Detroit	Detroit HS Grads
Mean	1983	1984
Median	1982	1983
Range	1977-1995	1977-1998

D2 Are you currently single and never married, married, separated, divorced or widowed?

	Metro Detroit	Detroit HS Grads
Single	15	38
Married	80	49
Separated/Divorced	5	9
Refused	--	1

D3 What year did you marry for the first time?

	Metro Detroit	Detroit HS Grads
Mean	1989	1990
Median	1990	1991
Range	1978-1998	1977-1999

D4 Do you have any children under age 18 currently living in the household?

	Metro Detroit	Detroit HS Grads
Yes	71	77
No	29	20
Refused	1	3

D5 In what year was your oldest child born?

	Metro Detroit	Detroit HS Grads
Mean	1990	1988
Median	1991	1988
Range	1978-1999	1975-1999

D6 (ASK ALL) What is your ethnic or racial background? Are you white, black, Hispanic, Asian, or something else?

	Metro Detroit	Detroit HS Grads
White	90	7
Black	4	84
Asian	2	1
Other	3	2
Refused	2	5

D7 Thinking about the job that is your PRIMARY SOURCE of income, was your TOTAL SALARY in 1998 between \$30,000 and \$40,000, between \$40,000 and \$50,000, between \$50,000 and \$60,000, between \$60,000 and \$75,000, or more than \$75,000?

	Metro Detroit	Detroit HS Grads
\$30,000-\$39,999	23	46
\$40,000-\$49,999	25	23
\$50,000-\$59,999	17	15
\$60,000-\$74,999	13	4
Over \$75,000	11	6
Don't know	1	1
Refused	10	7

D8 Gender

	Metro Detroit	Detroit HS Grads
Men	76	51
Women	24	49

Q5 – WHAT IS YOUR OCCUPATION?

- 2 AUTO DESIGNER
- 3 MEDICAL ASSISTANT
- 4 SYSTEMS REP.
- 5 RETAIL MANAGER (MEIJER INC)
- 6 TRUCK DRIVER.
- 7 ENGINEER
- 8 PURCHASING ANALYST
- 9 ADMINISTRATIVE ASSISTANCE
- 11 ENGINEER
- 12 RETAIL MANAGER
- 13 PROJECT ADMINISTRATOR
- 14 OPERATION SUPERVISOR.
- 15 TECHNICAL COMPUTER
- 16 ROUTE SALESMAN
- 19 PAINTER
- 20 SENIOR CUSTOMER SERVICE REPRESENTATIVE
- 21 TOOL DESIGN ENGINEER
- 22 TEST TECHNICIAN IN ENGINEERING
- 24 ELECTRICIAN
- 25 OFFICE MGR
- 26 SALES
- 27 FIREFIGHTER
- 28 ELECTRONIC RIGGER
- 29 PIPEFITTER FOR DAIMLERCHRYSLER
- 30 ELECTRICIAN
- 32 LOCKSMITH.
- 33 PRINTER.
- 34 AUTO WORKER
- 35 PLANT MANAGER OF A TOOL COMPANY
- 36 SALES-COMPUTER EQUIPMENT
- 37 QUALITY MANAGER FOR AUTOMOTIVE SUPPLIER
- 38 ENVIRONMENTAL WORKER
- 39 JANITORIAL BUSINESS.
- 40 SENIOR PATTERN MAKER
- 41 MACHINE OPERATOR

Q5 – WHAT IS YOUR OCCUPATION?

- 42 PRESS OPERATOR
- 43 JANITOR FOR SCHOOLS
- 44 PLANT MANAGER
- 45 ADMINISTRATIVE ASSISTANT
- 46 HAIR COLOR TECH.
- 47 BUS DRIVER
- 48 MECHANICAL ENGINEER
- 50 SAFETY ENGINEER
- 51 MANUFACTURING TECHNICIAN FOR FORD MOTOR COMPANY
- 52 PRIMARY AUTOMOTIVE DESIGNER.
- 54 SALES MANAGER.
- 56 CUSTOMER SERVICE REPRESENTATIVE
- 57 COMPUTER TECH.
- 58 QUALITY CONTROL MANGER
- 59 WELDER
- 60 AUTOMOTIVE DESIGNER
- 61 SHEET METAL WORKER
- 62 CONSTRUCTION FIELD ENGINEER
- 63 RECEIVING MANAGER.
- 64 MANAGER AT A GROCERY STORE
- 65 AUTOMOTIVE DESIGNER
- 66 ADMINISTRATOR ASSISTANT
- 67 ELECTRICIAN
- 68 POSTAL SUPERVISOR.
- 70 SHEET BUILDER, SHEET METAL.
- 71 DRYWALL CONSTRUCTION
- 72 COMMERCIAL PAINTER
- 73 SALES. (P) WASTE INDUSTRY.
- 74 PRIVATE OWNER OF A GAS STATION.
- 76 ENGINEER
- 78 WAITRESS
- 79 AUTOMOTIVE DESIGNER.
- 80 FRONT DESK RECEPTIONIST AT AN INSURANCE FIRM.
- 82 REAL ESTATE
- 83 REGISTERED NURSE
- 85 INFORMATION SYSTEMS

Q5 – WHAT IS YOUR OCCUPATION?

- 86 OFFICE MANAGER
- 88 BUILDING ENGINEER
- 89 AUTO MECHANIC
- 91 DRAFTING SUPERVISOR
- 92 COMPUTER TECHNICIAN
- 93 COMPUTER ANALYST
- 94 TRUCK DRIVER
- 95 DAY CARE WORKER
- 96 PRODUCTION TECH.
- 97 DENTAL EQUIPMENT REPAIR
- 98 RADIO DJ
- 99 ORDER ENTRY, DATA ENTRY
- 101 SALES (P) ELECTRICAL EQUIPMENT
- 102 ENGINEER; TECHNICIAN.
- 104 LEGAL SECRETARY
- 105 MOLD MAKER
- 106 MACHINIST
- 107 COMPUTER PROGRAM/ MANAGER
- 108 AUTO DESIGN
- 111 WORK AT THE ASSEMBLY PLANT.
- 112 ELECTRICIAN TECHNICIAN
- 113 WORK WITH COMPUTERS
- 114 SHEET METAL FABRICATOR
- 115 FRONT DESK MANAGER
- 116 PROGRAMMING MANAGER
- 118 SALES REP
- 119 MANUFACTURE CUTTING TOOLS
- 120 RETAIL MANAGER
- 121 SALES AGENT
- 123 H R SPECIALIST
- 124 TOOL MAKER
- 125 BANK TELLER
- 126 SENIOR DESIGNER
- 127 MACHINIST
- 128 UPS DRIVER
- 129 COMPUTER PROGRAMMER

Q5 – WHAT IS YOUR OCCUPATION?

- 130 ENGINEER
- 131 AUTOMOTIVE INSTRUCTOR
- 132 ENGINEER
- 134 TRUCK DRIVER
- 135 SET UP TECHNICIAN
- 136 PLANNER
- 137 TECHNICAL SERVICE MANAGER FOR A SOFTWARE COMPANY
- 138 PROCESS TECHNICIAN
- 139 MACHINERY MAINTENANCE/REPAIR
- 140 CREDIT UNION TELLER
- 141 SUPERINTENDENT FOR A COMPANY
- 142 ELECTRICIAN
- 144 CAD DESIGNER
- 145 COMPUTER OPERATOR
- 146 SMALL BUSINESS OWNER; MANUFACTURER OF BRUSHES FOR STREET SWEEPER'S.
- 147 RESPIRATORY THERAPIST
- 148 ELECTRICAL ENGINEER
- 149 SENIOR CAD DESIGNER
- 150 SPECIALIST, MACHINE OPERATOR
- 151 PLUMBER
- 152 MACHINIST
- 153 SENIOR FINANCIAL CLERK
- 154 ELECTRICIAN
- 155 AUTOMOTIVE DESIGNER
- 156 SALES MANAGER

Q10A – WHAT WERE THOSE SKILLS (YOU NEEDED TO QUALIFY FOR YOUR JOB)?

- 3 MEDICAL BACKGROUND.
- 4 ANALOG,ANALOG DIGITAL
- 12 BASIC COMPUTER SKILLS; MARKETING.
- 19 HAD TO BE IN THE AUTO BODY FIELD (P) NOTHING ELSE
- 21 KNOW AUTO CAD AND DRAFTING CLASSES (P) NOTHING ELSE
- 22 MECHANICAL APTITUDE
- 24 MATH, COMMON SENSE
- 27 EMT/FIRE ACADEMY
- 29. SOME SCHOOLING. REQUIREMENTS OF ONE YEAR ALGEBRA, SOME TRIG. (P) HAD TO WRITE AND SPELL. (P) MECHANICAL BACKGROUND. THAT'S ALL.
- 45 COMPUTER SKILLS. (P) TYPING AND THE DIFFERENT COMPUTER APPLICATIONS
- 46 YOU HAVE TO TAKE CLASSES AND PARTICIPATE IN HAIR/BEAUTY TRADE SHOWS. THERE'S ALOT OF OUTSIDE TRAINING NECESSARY.
- 50 COMMUNICATION SCHOOL
- 52 DESIGNING ON A COMPUTER. (P) HOW TO WORK A COMPUTER. (P) THAT'S IT.
- 59 MATH TO FINISH, SCIENCE CLASSES. (P) HANDS ON TECHNICAL CLASSES
- 60 DRAFTING AND DESIGNING
- 61 MATH AND MECHANICAL SKILLS
- 62 BACKGROUND IN CONSTRUCTION-RELATED SUBJECTS.
- 65 ASSOCIATES DEGREE
- 66 COMPUTER SKILLS
- 70 WELDING.
- 72 YOU HAVE TO GO THROUGH A WEEKLY CLASS PROVIDED BY THE UNION.
- 85 COMPUTER LANGUAGE, UNIX, COMPUTER APPLICATIONS
- 88 MECHANICAL SKILLS (P) THAT'S IT
- 89 JUST SKILLS TO BE A MECHANIC
- 91 CLASSES AT THE COLLEGE. ASSOCIATES DEGREE IN BODY DESIGN.
- 95 CHILD CARE TRAINING
- 97 ELECTRONICS TRAINING
- 98 PRODUCTION, NEWS WRITING
- 102 ELECTRONIC DESIGN SKILLS.
- 106 MACHINIST SKILLS
- 107 PROGRAMMING SKILLS
- 108 DRAFTING, COMPUTER DESIGN KNOWLEDGE
- 112 HIGHER MATH ELECTRIC ABILITY, COMPUTER KNOWLEDGE
- 113 COMPUTER PROGRAMMING. (P) THAT'S THE KEY SKILL.

Q10A – WHAT WERE THOSE SKILLS (YOU NEEDED TO QUALIFY FOR YOUR JOB)?

- 114 WELDING, FABRICATING SKILLS, SHEET METAL LAYOUT
- 116 SOCIAL DEGREE
- 119 CUTTING TOOLS
- 120 NEEDED TWO OR FOUR YEAR DEGREE
- 123 COMPUTER
- 124 MATH SKILLS, COMPUTER SKILLS
- 126 DRAFTING
- 132 JOB EXPERIENCE
- 145 BASIC COMPUTER SKILLS
- 147 AA DEGREE
- 148 ENGINEERING PRINCIPLES; KNOWLEDGE OF ELECTRICAL PRINCIPALS AND ELECTRICAL DESIGN.
- 152 MATH/COMMON SENSE/READING
- 153 SHORT HAND/TYPING
- 154 LICENSE-KNOWLEDGE-MATH
- 155 COMPUTER SOFTWARE

**Q11A -- WHERE DID YOU GAIN THE KNOWLEDGE OR SKILLS YOU NEEDED TO GET THAT
(LICENSE, CREDENTIALS, OR DEGREE)?**

3 FROM THE PHYSICIAN I'M WORKING FOR.
4 THROUGH CURRENT COMPANY
6 I HAD TO GET A TYPE "A" DRIVERS LICENSE WITH HAZMAT.
13 THROUGH EXPERIENCE
16 READ THE DRIVERS MANUAL
24 IN THE DETROIT AREA
27 COLLEGE AND FIRE ACADEMY
28 ON THE JOB. (P) TRAINING AT WORK. (P) THATS ALL.
29 MACOMB COMMUNITY COLLEGE OR YOU CAN GO TO HENRY FORD COMMUNITY
COLLEGE.
30 TRADE SCHOOL AND ON THE JOB
32 THROUGH MY PREVIOUS EMPLOYER. (P) ALSO DIFFERENT CLASSES AT COMMUNITY
COLLEGE.
37 THROUGH AN INDUSTRY SUPPORTED SEMINA
38 I HAD TO GET A COMMERCIAL DRIVERS LICENSE. 40 HOURS OF HAZARDOUS WASTE
TRAINING.
43 ON JOB TRAINING
46 YOU MUST ATTEND BEAUTY SCHOOL FIRST. (P) YOU ALSO HAVE TO PASS THE STATE
BOARD EXAM.
47 THEY TRAINED ME. (P) YOU NEED A COMMERCIAL DRIVER'S LICENSE.
48 LAWRENCE TECHNOLOGY UNIVERSITY
59 THROUGH A COLLEGE (P) WELDING TRADE CLASS
60 COLLEGE
62 THROUGH THE COMPANY I'M WITH NOW.
63 AT WORK.
65 COMMUNITY COLLEGE
71 AT COLLEGE AND CONTINUED EDUCATION
73 EXPERIENCE. TROUGH PREVIOUS JOBS.
74 MECHANICAL DEGREE IN COLLEGE. CAREER SCHOOLS. PREVIOUS JOB WITH
SERVICING CARS.
82 SCHOOL, REAL ESTATE SCHOOL
83 NURSING SCHOOL
85 ASSOCIATE DEGREE, PRIOR MANAGEMENT EXPERIENCE
88 COLLEGE (P) HENRY FORD COMMUNITY COLLEGE
89 BY SCHOOL AND TESTS (P) NO
94 ON THE JOB TRAINING

**Q11A -- WHERE DID YOU GAIN THE KNOWLEDGE OR SKILLS YOU NEEDED TO GET THAT
(LICENSE, CREDENTIALS, OR DEGREE)?**

- 95 CITY OF DETROIT
- 96 WORK
- 106 8 YEARS OF SKILLS, OVER THE YEARS AT DIFFERENT SHOPS
- 120 TWO YEAR DEGREE
- 123 HIGH SCHOOL
- 131 AT WORK
- 134 THE BOOK FROM SECRETARY STATE. YOU GOT TO HAVE A BIG RIG LICENSE.
- 139 HANDS ON SKILL. (P) NO CLASSES WERE NECESSARY.
- 140 I NEEDED TO BE BONDED. (P) WORK HISTORY AND ON THE JOB TRAINING (HANDS ON).
- 147 COLLEGE
- 148 WORKING IN RELATED FIELDS.SOME SCHOOLING.
- 151 PLUMBERS LOCAL 98
- 153 SCHOOL AND ON THE JOB TRAINING
- 154 DAD (FAMILY OWNED CO.)

Q13A -- WHERE ARE YOU DOING THAT TRAINING (RELATED TO YOUR CURRENT LINE OF WORK)?

- 4 THROUGH THE COMPANY
- 11 SCHOOL CRAFT CENTER
- 13 DETROIT COLLEGE OF BUSINESS
- 14 IN HOUSE
- 22 DIFFERENT LOCATION
- 24 ON THE JOB
- 28 AT WORK. (P) THATS IT.
- 29 MACOMB COMMUNITY COLLEGE AND HENRY FORD CC. AFTER THAT THE COMPANY WILL SEND ME TO THEIR OWN TRAINING CENTER.
- 30 THEY SEND US TO DIFFERENT AREAS. THE VENDERS WHO SELL THE EQUIPMENT TO THE COMPANY, THEY SUPPLY THE TRAINING.
- 32 THROUGH THE LOCAL LICENSE BOARD.
- 42 WINNAPEG, CANADA AND DAYTON, OHIO
- 45 ITS A MANUFACTURING FACILITY IN THE AUTOMOTIVE INDUSTRY SO I'M PURSUING COURSES RELATED TO MANUFACTURING. MANUFACTURING TECHNIQUES IS AN EXAMPLE OF ONE OF THE COURSES I'M TAKING.
- 46 I ATTEND DIFFERENT HAIR SHOWS AND CLASSES OFFERED AT DIFFERENT PLACES. (P) SOMETIMES WHEN A NEW PRODUCT LINE COMES OUT THEY OFFER CLASSES TO EACH YOU ABOUT THE PRODUCT AND ALSO OFFER HANDS ON TRAINING TO LEARN HOW TO USE THE PRODUCTS.
- 50 ITS HOME BASED, JUST A TEST
- 51 HENRY FORD COMMUNITY COLLEGE
- 52 OAKLAND COMMUNITY COLLEGE, FORD MOTORS TRAINING CENTER.
- 57 TRAINING THROUGH COMPANIES AND THROUGH DIFFERENT PEOPLE LIKE NEW HORIZON.
- 58 MACOMB COMMUNITY COLLEGE. I'M TAKING AN ISO9000 COURSE IN COLLEGE
- 59 HENRY FORD (P) TWO YEAR DEGREE
- 60 NIGHT SCHOOL AT ANOTHER COLLEGE... I DON'T REALLY WANT TO SAY WHICH ONE.
- 62 THROUGH THE STATE. (P) MICHIGAN DEPARTMENT OF TRANSPORTATION.
- 65 UNIVERSITY
- 85 UNIVERSITY OF PHOENIX
- 89 G.M. TECHNICAL CENTER
- 91 THROUGH UNIVERSITY OF CENTRAL. (C.N.U.)
- 102 WASHTENAW COMMUNITY COLLEGE.
- 104 AT WORK. ON THE JOB. COMPANY COURSES.
- 106 THOUGH ANOTHER COMPANY THAT MY JOB BOUGHT
- 111 I JUST GOT ACCEPTED FOR THE SCHOOL TO GO TO SKILL TRADE PROGRAM

Q13A -- WHERE ARE YOU DOING THAT TRAINING (RELATED TO YOUR CURRENT LINE OF WORK)?

- 113 IN THE COMPANY
- 116 THIRD PARTY VENDOR
- 126 CONTRACT HOUSE
- 129 WORK PROVIDED CLASSES, IT'S AT WORK AND THEY PAY FOR IT.
- 131 AT WORK, WE'RE ALWAYS CROSSTRAINING. ITS ONGOING TRAINING
- 135 WE GET GRANTS FROM THE STATE AND WE DO OUR TRAINING IN THE SHOP
- 137 IN A COMMUNITY COLLEGE AND A PRIVATE TUTOR
- 138 THEY'RE OFFERING CLASSES AT MY PLACE OF EMPLOYMENT FROM MCC.
- 139 MACOMB COMMUNITY COLLEGE.
- 142 HENRY FORD COMMUNITY COLLEGE
- 144 CENTRAL MICHIGAN
- 148 SELF TRAINED.LEARNING BY DOING. GETTING BOOKS ON THE SUBJECT AND DIGGING IT OUT.
- 149 SOME PRIVATE SOURCE
- 151 PLUMBERS LOCAL 98
- 153 SCHOOL THROUGH EMPLOYER
- 154 WEEKEND SEMINARS
- 155 ON SIGHT AT FORD MOTOR COMPANY THROUGH MICHIGAN TECHNOLOGY UNIVERSITY.
- 156 ON THE JOB. CATAPULT SEMINARS. VENDOR TRAINING AND INTERNET

Q14A – WHAT ARE THE ONE OR TWO TECHNICAL SKILLS THAT HAVE HELPED YOU THE MOST IN YOUR CAREER?

- 2 COMPUTER TRAINING. (P) THATS IT.
- 3 COMPUTER COURSES.
- 4 TROUBLE-SHOOTING SKILLS
- 5 OFFICE SKILLS LIKE PAPERWORK. IN THE ARMY I LEARNED TO PUSH PEOPLE; IN OTHER WORDS, MOTIVATING PEOPLE.
- 6 PATIENCE. YOU HAVE TO KNOW HOW TO DEAL WITH PEOPLE.
- 7 MATH
- 8 P.C. TRAINING. (P) I DON'T KNOW. IT WAS MOSTLY HANDS ON KIND OF STUFF.
- 9 COMPUTER SKILLS.
- 11 MATH; MACHINERY.
- 12 COMPUTER TRAINING; MARKETING SKILLS.
- 13 COMPUTER SKILLS
- 14 P.C SKILLS AND MAINFRAME SKILLS
- 15 PROBLEM SOLVING, PEOPLE SKILLS LIKE CLASSROOM TRAINING.
- 16 COMPUTERS, ACCOUNTING
- 19 VOCATIONAL EDUCATION IN HIGH SCHOOL AND TRADE SCHOOL AFTER HIGH SCHOOL. (P) WORKING IN THE FIELD.
- 20 COMPUTERS. (P) JUST WORKING WITH PEOPLE ON THE PHONE (P) THAT'S IT
- 21 EXPERIENCE FROM THE FLOOR AT MY CURRENT JOB. (P) A GOOD MATH BACKGROUND.
- 22 MECHANICAL APTITUDE AND MECHANICAL INCLINATION
- 24 MATH SKILLS.
- 25 ACCOUNTING
- 26 COMPUTER LITERACY
- 27 I'M NOT SURE.
- 28 THE TRAINING THEY GAVE ME AT WORK. (P) THAT'S ABOUT IT.
- 29 READ BLUEPRINTS, MECHANICALLY INCLINED.PNEUMATICS.
- 30 ABILITY TO RUN SOFTWARE AND COMPUTERS
- 32 CODE ENFORCEMENT AND RULES. (P) ELECTRICAL CIRCUITS FOR ALARM SYSTEMS.
- 33 PRINTING THROUGH VOCATIONAL HIGH SCHOOL. (P) COMPUTER CLASSES HAVE BEEN EXTREMELY IMPORTANT.
- 34 ENGINEERING ABILITIES AND STAMINA, AND I WORK WELL WITH OTHER PEOPLE.
- 35 MATHEMATICS AND TOOL AND DIE EXPERIENCE.
- 36 UNDERSTANDING COMPUTERS AND HOW THEY WORK AND WHAT PEOPLE WOULD NEED.
- 37 COMPUTER KNOWLEDGE (MICROSOFT PRODUCTS), ORGANIZATIONAL SKILLS AND KNOWLEDGE OF THE COMPANY.

Q14A – WHAT ARE THE ONE OR TWO TECHNICAL SKILLS THAT HAVE HELPED YOU THE MOST IN YOUR CAREER?

- 38 LEARNING HOW TO OPERATE THESE TRUCKS
- 39 NONE REALLY
- 40 I DON'T KNOW, I TOOK SOME DRAFTING CLASSES AND SEWING
- 41 THERE'S NOTHING TECHNICAL IN MY JOB.MEASURING, READING A TAPE MEASURE, MATHEMATICS, THAT'S BASICALLY IT
- 42 MECHANICAL APTITUDE AND MATH
- 43 BUILDING TRADES
- 44 ELECTRICAL SKILLS AND PEOPLE MANAGEMENT. (P) YOU NEED ORGANIZATIONAL SKILLS, COMPUTER SKILLS, AND BE ABLE TO COMMUNICATE WELL.
- 45 REALLY NOTHING. (P) I HAD TEN YEARS EXPERIENCE IN QUALITY CONTROL SO THAT HELPED.
- 46 YOU HAVE TO BE GOOD WITH YOUR HANDS. (P) YOU HAVE TO HAVE AN UNDERSTANDING OF NEW TRENDS, FASHIONS AND STYLES.
- 47 IT'S NOT A TECHNICAL SKILLS KIND OF JOB. YOU NEED PEOPLE SKILLS. (P) THAT'S IT.
- 48 SCHOOLING. (SCIENCE)
- 50 COMMUNICATION
- 51 HAND AND EYE COORDINATION. THE ABILITY TO READ AND WRITE AND SOME MATH SKILLS.
- 52 KNOWING HOW TO WORK A COMPUTER.
- 54 KNOWLEDGE OF COMPUTER USE. (P) KNOWLEDGE OF WEB BASED PRODUCTS.
- 56 MY COMPUTER KNOWLEDGE, AND PRODUCT KNOWLEDGE.OH, AND MY CUSTOMER SERVICE SKILLS
- 57 KNOWING COMPUTERS, KNOWING WIRING.BASICALLY, KNOWING HOW TO WORK AND USE A COMPUTER.
- 58 THE KNOWLEDGE OF MY JOB AND BEING IN THE BUSINESS FOR 12 YEARS.
- 59 SOMETHING THAT MOM AND DAD TAUGHT ME - DON'T BE LAZY. (P) METAL CLASSES.
- 60 MATH AND COMMUNICATIONS
- 61 UNDERSTANDING BLUEPRINTS AND MECHANICAL DRAFTING
- 62 THE COMPUTER PART OF IT. (P) I THINK THAT'S WHAT HELPED ME THE MOST.
- 63 NONE, REALLY. (P) NO.
- 64 NO TECHNICAL SKILLS
- 65 MATHEMATICS & PROBLEM SOLVING
- 66 TYPING. (P) DATA BASE.
- 67 TROUBLE-SHOOTING. BASIC ELECTRICITY.
- 68 COMPUTER SKILLS; MATH IN HIGH SCHOOL.
- 70 BLUEPRINT READING
- 71 PATIENCE, BUILDERS LICENSE

Q14A – WHAT ARE THE ONE OR TWO TECHNICAL SKILLS THAT HAVE HELPED YOU THE MOST IN YOUR CAREER?

- 72 NOTHING I CAN THINK OF RIGHT NOW.
- 73 KNOWLEDGE OF TRANSPORTATION. (P) HAULING. YOU KNOW, BEING BEHIND THE WHEEL
- 74 TWO YEARS OF COLLEGE. EXPERIENCE THROUGH PREVIOUS JOB.
- 75 COMPUTER SKILLS.(P) NO, NOTHING ELSE.
- 76 MATH AND COMPUTER SKILLS.(P) NO, NOTHING ELSE.
- 78 I DON'T KNOW.
- 79 COMPUTER SKILLED; DRAFTING
- 80 I DON'T KNOW.(P) NO, NOTHING ELSE.
- 82 COMPUTERS, MATH, ENGLISH
- 83 IV SKILLS, CARE MANAGEMENT
- 85 PEOPLE SKILLS, FORMAL TRAINING IN COMPUTERS
- 86 COMPUTERS AND.. I CAN'T THINK OF ANYTHING ELSE.
- 88 MECHANICAL AND ELECTRICAL.
- 89 AIR BAG SYSTEMS, AIR CONDITIONING SYSTEMS.
- 91 TYPING AND COMMUNICATION.
- 92 COMPUTER TRAINING.
- 93 DATABASE PROGRAMMING
- 94 NONE
- 95 NONE
- 96 WELDING, HIGH LOW DRIVING
- 97 ELECTRONICS TRAINING AND MECHANICAL SKILLS.
- 98 COMPUTER SKILLS
- 99 COMPUTERS
- 101 ON THE JOB EXPERIENCE. (P) COLLEGE CLASSES AND A TECHNICAL MAJOR.
- 102 ELECTRONIC SKILLS, DIGITAL CIRCUIT THEORY.
- 104 TYPING AND COMPUTER SKILLS.
- 105 MATH. COMMON SENSE
- 106 COMPUTER SKILLS, MATH
- 107 TROUBLE SHOOTING SKILLS. PROGRAMMING SKILLS
- 108 DRAFTING COMPUTER DESIGN
- 111 READING, COMPUTERS, PEOPLE SKILLS
- 112 ABILITY TO USE TEST EQUIPMENT. UNDERSTANDING ELECTRICAL BASICS.
- 113 COMPUTER PROGRAMMING. (P) TECHNICAL WRITING.
- 114 BLUEPRINT READING AND DRAFTING.

Q14A – WHAT ARE THE ONE OR TWO TECHNICAL SKILLS THAT HAVE HELPD YOU THE MOST IN YOUR CAREER?

- 115 COMPUTERS AND ACCOUNTING SKILLS.
- 116 PROGRAMMING.
- 118 NOTHING
- 119 MATH AND SCIENCE
- 120 COMPUTERS AND COMMUNICATION
- 121 COMPUTER
- 123 COMPUTER
- 124 NOT SURE
- 125 USING A COMPUTER, I GUESS.
- 126 COMMON SENSE AND FORTITUDE.
- 127 PROGRAMMING THE MACHINE.
- 128 DRIVERS ED
- 129 COMPUTER KNOWLEDGE. (P) MATH.
- 130 MATH AND CHEMISTRY.
- 131 TECHNICAL WRITING ABILITY, ORAL COMMUNICATION SKILLS.
- 132 EDUCATION. (P) COMPUTER DESIGN.
- 134 I CAN'T TELL YOU. (P) I REALLY DON'T KNOW, THERE'S NOT MANY TECHNICAL THINGS YOU NEED TO DRIVE. COMMON SENSE, MAYBE.
- 135 MATH AND BLUEPRINT READING
- 136 ADVANCED SCIENCE
- 137 COMPUTER KNOWLEDGE AND ELECTRONICS
- 138 INJECTION MOLDING. (P) THAT'S REALLY ALL I HAVE, EXCEPT MAYBE SUPERVISORY SKILLS.
- 139 BEING MECHANICALLY INCLINED HELPED. (P) THAT'S REALLY IT
- 140 PEOPLE SKILLS AND MATHEMATICS. (P) YOU HAVE TO BE COMPUTER LITERATE.
- 141 OPERATING MACHINERY. (P) PEOPLE SKILLS.
- 142 ELECTRONICS & MATH AND PROGRAMMING COMPUTERS LOGICALLY
- 144 TYPING
- 145 LEARNING WINDOWS & BEING ABLE TO OPERATE A PC
- 146 WELDING; MANAGEMENT, SALES AND MARKETING.
- 147 AA DEGREE.(P)NO, NOTHING ELSE.
- 148 MECHANICAL APTITUDE.TROUBLE SHOOTING SKILLS.GOOD COMMUNICATION SKILLS.
- 149 I STARTED AS A PATTERN MAKER, AND THEN A MODEL MAKER, THEN SENIOR CAD DESIGNER.
- 150 COMPUTERS
- 151 NONE

Q14A – WHAT ARE THE ONE OR TWO TECHNICAL SKILLS THAT HAVE HELPD YOU THE MOST IN YOUR CAREER?

- 152 HAND-EYE COORDINATION/MATH, READING, COMMON SENSE SKILLS.
- 153 COMPUTERS- THE BASICS LIKE WORD, EXCEL, AND PEOPLE SKILLS.
- 154 I'M NOT SURE
- 155 MY MECHANICAL BACKGROUND. THATS THE MOST IMPORTANT
- 156 P.C. SKILLS. INTERNET SKILLS. (P) WORKING WITH SPREADSHEETS.

Q5A – WHAT IS YOUR OCCUPATION?

- 1 AUTO WORKER
- 2 MARKETING DIRECTOR
- 3 C.N.A
- 4 SUPERINTENDENT
- 5 CONSTRUCTION
- 6 MARKETING SUPPORT REP.
- 7 WELDER
- 8 FORK LIFT DRIVER
- 9 MAKE BUMPERS
- 10 HI-LO DRIVER
- 11 CARPENTER
- 12 JUNIOR ACCOUNTANT
- 13 SAFETY SPECIALIST
- 14 FOOD SERVICE SUPERINTENDENT
- 15 STATICAL REPORTING FOR A LAW FIRM
- 16 LPN
- 17 SECRETARY
- 18 A SUPERVISOR FOR AN AUTO REPOSESSION COMPANY
- 19 SALESMAN
- 20 CLERK
- 21 TRUCK DRIVER
- 22 CLERK
- 23 ADMINISTRATIVE ASSISTANCE
- 24 WORD PROCESSOR
- 25 TECHNICAL
- 26 CASHIER
- 27 WORK IN THE LAUNDRY
- 28 POLICE OFFICER
- 29 CONSTRUCTION
- 30 MANAGER
- 31 MAIL CARRIER
- 32 PAINTER
- 33 LAB TECH
- 34 U A W WORKER
- 35 AUTO SALES

Q5A – WHAT IS YOUR OCCUPATION?

- 36 MAIL HANDLER
- 37 CUSTOMER SERVICE REP
- 38 MAIL PROCESSER
- 39 LAND SURVEYER
- 40 BRANCH CORDINATOR
- 41 CONDUCTOR
- 42 SUPERVISOR
- 43 HEALTH AND SAFETY REPRESENTATIVE
- 44 HI LO DRIVER
- 45 POSTAL WORKER
- 46 COST ANALYST
- 47 NURSE
- 48 FACTORY AUTO WORKER
- 49 SUPERINTENDENT OF CONSTRUCTION COMPANY
- 50 TELECOMMUNICATIONS SPECIALIST
- 51 CUSTOMER SERVICE REP.
- 52 HI-LO DRIVER
- 53 JANITOR
- 54 DETROIT POLICE
- 55 CITY OF DETROIT'S TRANSPORTATION TERMINAL ASSISTANT
- 56 CUSTOMER ACCOUNT EXECUTIVE
- 57 SOCIAL WORKER
- 58 PRINTER
- 59 SALES REPRESENTATIVE FOR FORD MOTOR COMPANY
- 60 FINANCIAL SERVICES REPRESENTATIVE
- 61 ASSEMBLY WORKER
- 62 MAILMAN
- 63 PASTOR
- 64 ASSEMBLY WORKER
- 65 ASSISTANT PAYMENT WORKER
- 66 XEROX CORPORATION IN THE SERVICE AREA
- 67 STATE CLERK FOR MICHIGAN
- 68 ACCOUNTANT
- 69 EQUIPMENT OPERATOR AND TRUCK DRIVER
- 70 EMS FIRE DISPATCHER FOR DETROIT
- 71 PROGRAM MANAGER

Q5A – WHAT IS YOUR OCCUPATION?

- 72 COSMETOLOGIST
- 73 MANAGER
- 74 POLICE OFFICER
- 75 FIREFIGHTER
- 76 FFA
- 77 COMPUTER (CAD)
- 78 PRIVATE 1ST CLASS-ARMY
- 79 GENERAL LABOR
- 80 BANKER
- 81 NURSE
- 82 POLICE OFFICER
- 83 ASSEMBLER
- 84 REGISTERED NURSE
- 85 ADULT FOSTER CARE PROVIDER
- 86 ADMINISTRATIVE SUPPPORT
- 87 ADMINISTRATIVE ASSSISTANT FOR AN EXECUTIVE ENGINEER
- 88 ASSEMBLY LINE WORKER
- 89 POSTAL WORKER
- 90 PROCESSOR
- 91 OWN BONDS
- 92 SMALL PRESS OPERATOR
- 93 FINANCIAL ADVISOR
- 94 AUTO MECHANIC
- 95 ADJUDICATOR
- 96 BUSINESS ANALYST (CUSTOMER REPRESENTATIVE)
- 97 BANK TELLER
- 98 MECHANIC
- 99 SHIPPING CLERK
- 100 CALL CENTER TRAINER
- 101 CHEF
- 102 MAILMAN
- 103 TRUCKDRIVER
- 104 BANKER NON-MANAGEMENT
- 105 ACCOUNTING
- 106 CLAIMS REP
- 107 CUSTOMER SERVICE REPRESENTATIVE

Q5A – WHAT IS YOUR OCCUPATION?

- 108 PRESS OPERATOR
- 109 CITY OF DETROIT POLICE OFFICER
- 110 BUSINESS OWNER AND SENIOR LEVEL TECHNICIAN
- 111 TRAVEL CONSULTANT
- 112 SPILL BUILDER (FACTORY WORKER)
- 113 ASSISTANT MANAGER IN A GROUP HOME
- 114 ASSEMBLER
- 115 WELDER
- 116 SHOP BLAST OPERATOR.
- 117 I'M A NURSE
- 118 DYNO TECH RUNNER
- 119 RECEPTIONIST
- 120 HEAD OF DEPARTMENT
- 121 REAL ESTATE SALES
- 122 FINANCIAL SUPERVISOR
- 123 SALES MANAGER
- 124 RETAIL MANAGER
- 125 BUYER
- 126 INSTALLER TECH. (CONSTRUCTION WORKER)
- 127 HOST AT A RESTAURANT
- 128 COMPUTER TECHNICIAN
- 129 WORK AT TARGET
- 130 BARBER
- 131 GENERAL PRODUCTION
- 132 FACTORY WORKER
- 133 CUSTODIAN
- 134 TESTER
- 135 CEO OF DAYCARE
- 136 ENGINEER
- 137 DANCE INSTRUCTOR
- 138 ELECTRICAL TECHNICIAN
- 139 EXECUTIVE ASSISANT
- 140 ACCOUNTING COORDINATOR
- 141 BOARD OF EDUCATION EMPLOYEE
- 142 AMERA-TEX. CABLE TV INSTALATION.
- 143 DAYCARE PROVIDER

Q5A – WHAT IS YOUR OCCUPATION?

- 144 COMMUNICATION OPERATOR
- 145 PACKER
- 146 FACTORY WORKER
- 147 CRANE OPERATOR
- 148 WATER AND SEWAGE REPAIRMAN
- 149 BOTTLE SORTER
- 150 COLLECTOR
- 151 PRODUCTION
- 210 LEGAL SECRETARY
- 231 FINANCIAL ANALYSIS
- 253 LEAD TAX EXAMINER.
- 275 PLANT MANAGER, FOOD SERVICES.
- 277 QUALITY CONTROL INSPECTOR
- 281 AUTO MECHANIC
- 284 BUILD CARS
- 287 PROJECT ENGINEER
- 300 RESPIRATORY THERAPIST
- 303 SELF EMPLOYED PAINTER AND CARPENTER.
- 310 WAREHOUSE ATTENDANT
- 343 BAKER

Q10A – WHAT WERE THOSE SKILLS (YOU NEEDED TO QUALIFY FOR YOUR JOB)?

- 3 CERTIFICATION. (P) YOU NEED A LICENSE BEFORE YOU CAN PRACTICE.
- 5 WELDING AND MACHINE OPERATOR
- 6 TYPING
- 7 MACHINE OPERATOR, HI-LO DRIVER, PRESS OPERATOR
- 12 BASIC ACCOUNTING AND COMPUTER SKILLS
- 13 LAW ENFORCEMENT. (P) SAFETY MANAGEMENT INDUSTRIAL HYGIENE PRINCIPAL MANAGEMENT
- 15 COMPUTER SKILLS, BUSINESS LAW AND RECORD KEEPING
- 16 I HAD TO HAVE NURSING LICENSE
- 21 BASICALLY DRIVING THE TRUCK AND TAKING THE TRUCK DRIVING CLASSES
- 22 MEDICAL TERMINOLOGY
- 24 60 WORDS A MIN TYPING PROFICIENCY TEST
- 32 HEAVY EQUIPMENT, HYDRO TRAINING, CONSTRUCTION
- 33 AUTOMOTIVE TRAINING
- 38 PACKING
- 39 MATH (P) BLUEPRINT READING (P) INSTRUMENTATION
- 47 PHLEBOTOMY, RESPIRATOR EXPERIENCE
- 48 TO DRIVE A FORK TRUCK
- 49 BLUEPRINT READING, MATHEMATICS, GEOMETRY AND PEOPLE SKILLS, SPEAKING AND WRITING WELL.
- 58 MIXING INK, READ RULERS AND WEIGHTS, THE DENSITY OF FILM, RUN FILM CAMERAS. (P) ALSO MAKE CARBON AND PAPER PLATES
- 60 SERIES 6- STOCK FOR STATE LICENSING AND SERIES 63 -CONTRACTS FOR FEDERAL LICENSING
- 67 COMPUTER KNOWLEDGE, TYPING SKILLS, CUSTOMER SERVICE
- 71 COMPUTER SKILLS, COMMUNICATION, MANAGEMENT
- 72 COSMETOLOGY
- 77 GENERAL EDUCATION
- 81 CLINICAL SKILLS , X-RAYS, IV KNOWLEDGE, BLOOD PRESSURE AND LAB KNOWLEDGE. ALSO PATIENT CARE.
- 84 WELL, NURSING SKILLS, YOU KNOW, HANDS ON SKILLS. (P) THERE ARE JUST SO MANY I DON'T WANT TO ELABORATE REALLY.
- 86 COMPUTER COURSES
- 87 HAD TO BE COMPUTER LITERATE
- 93 SERIES 63 LICENSE, HEALTH LICENSE, AND A FEW OTHER LICENSES
- 94 TECHNICAL SCHOOL
- 95 MEDICAL AND COMPUTER KNOWLEDGE

Q10A – WHAT WERE THOSE SKILLS (YOU NEEDED TO QUALIFY FOR YOUR JOB)?

- 98 MECHANICAL
- 99 COMPUTER LITERATE, HIGH LOW LICENSE, HIGH CLIMBING, SHIPPING TECHNIQUES
- 100 COMPUTER TRAINING (P) PRESENTATION SKILLS
- 101 MANAGEMENT; HUMAN RESOURCES
- 104 COMPUTER SKILLS
- 105 CLERICAL; COMPUTER; FILING
- 110 DOUBLE EEPURNS TRAINING
- 120 BEING A LAB TECHNICIAN, COMMUNICATION SKILLS
- 121 REAL ESTATE LICENSE
- 122 BASIC MATH SKILLS, 10 KEY AND COMPUTER KNOWLEDGE
- 128 SOFTWARE PROGRAMS LIKE MICROSOFT OFFICE, SCHEDULING PROJECTS, NETWORKING
- 131 COMPUTERS
- 134 OPERATE COMPUTERIZED MACHINES
- 136 WELDING
- 138 BASED ON ELECTRONICS
- 143 GETTING A LICENSE
- 150 SPECIAL CODING
- 277 EQUIPMENT; READING CERTAIN TYPES OF GAUGES.
- 281 AUTOMOTIVE TRAINING
- 287 BACKGROUND IN SERVO HYDRAULIC CONTROL SYSTEMS
- 300 MECHANICAL SKILLS. (P) GOOD BACKGROUND IN SCIENCES (ANATOMY).
- 343 CAKE DECORATING

Q11A -- WHERE DID YOU GAIN THE KNOWLEDGE OR SKILLS YOU NEEDED TO GET THAT (LICENSE, CREDENTIALS, OR DEGREE)?

- 2 ON THE JOB.
- 3 D.B.I. INSTITUTE. (P) IT WAS A VOCATIONAL CLASS, LOTS OF PROMOTIONS AND HYPE ABOUT IT.
- 4 I TOOK A CLASS NOT AT A COLLEGE, JUST A CLASS THAT TAUGHT CAD-CAM AND BLUEPRINT
- 5 THE COMPANY I WORK FOR
- 10 ON THE JOB
- 12 COMMUNITY COLLEGE. (P) OAKLAND COMMUNITY COLLEGE.
- 16 I WENT TO SCHOOL
- 21 TOOK TRAINING CLASSES THROUGH A PROGRAM - WAS SOMEWHERE ELSE - NOT SCHOOL
- 31 GENERAL MAILING FACILITY GMF, TROY MI
- 39 THROUGH COLLEGE
- 42 ON THE JOB TRAINING AND OFF-CAMPUS TRAINING
- 46 ON THE JOB
- 47 OAKLAND AND WAYNE COMMUNITY COLLEGE
- 48 OPERATOR'S LICENSES FOR VEHICLES
- 52 ON THE JOB
- 54 METROPOLITAN POLICE ACADEMY
- 55 BASIC COMPUTER SKILLS USING WORDPERFECT AND OTHER PROGRAMS. AND SUPERVISORY COURSES.
- 57 I WENT TO COLLEGE WHILE I WAS WORKING AND I ALSO WENT TO COLLEGE WHEN I WAS SEVENTEEN BEFORE I STARTED LOOKING FOR A JOB.
- 60 SEVERAL FINANCIAL SCHOOLS - DEARBORN FINANCIAL INSTITUTE - INDEPENDENT STUDY - AFI
- 69 ON THE JOB.
- 70 FIRE DEPARTMENT.
- 72 MICHIGAN
- 74 EMPLOYER
- 80 WAYNE STATE COLLEGE
- 81 SOUTHFIELD MEDICAL AND WAYNE STATE COLLEGE
- 84 COLLEGE. (P) SCHOOLCRAFT COMMUNITY COLLEGE
- 85 OH BY WORD OF MOUTH. (P) YEAH I GOT MY LICENSE FROM THE STATE.
- 93 DEARBORN FINANCIAL
- 99 ON THE JOB
- 102 COURSES IN ORIENTATION WITH COMPANY.
- 103 THE ARMY

**Q11A -- WHERE DID YOU GAIN THE KNOWLEDGE OR SKILLS YOU NEEDED TO GET THAT
(LICENSE, CREDENTIALS, OR DEGREE)?**

- 110 MOTOROLA TECHNICAL SCHOOL
- 117 FROM SCHOOL (P) WAYNE COUNTY
- 121 REAL ESTATE LICENSE OBTAINED
- 130 MICHIGAN BARBER COLLEGE
- 131 MY EMPLOYER
- 135 CHILD CARE AND MICHIGAN STATE
- 136 ON THE JOB
- 138 LICENSE (P) TRADE/TECHNICAL SCHOOL
- 141 CLASSES THAT THEY OFFERED
- 143 WORKSHOPS, SEMINARS, PAST EXPERIENCE
- 148 ON THE JOB
- 150 NATIONAL INSTITUTE OF TECHNOLOGY
- 151 HIGH SCHOOL
- 231 THROUGH MY PREVIOUS EMPLOYER. (P) ALSO DIFFERENT CLASSES AT COMMUNITY COLLEGE.
- 281 ON THE JOB
- 287 MACOMB COMMUNITY COLLEGE
- 300 COMMUNITY COLLEGE.
- 310 FROM THE EMPLOYER

Q13A -- WHERE ARE YOU DOING THAT TRAINING (RELATED TO YOUR CURRENT LINE OF WORK)?

- 3 WAYNE STATE UNIVERSITY
- 4 MY JOB PAYS FOR SEMINARS, MANY OF THEM, SO I GO. (P) THEY'RE ALWAYS IN DIFFERENT PLACES AND TALK ABOUT DIFFERENT STUFF.
- 6 AT THE COMPANY I WORK FOR
- 14 AT WORK
- 15 ON THE JOB; THEY HAVE TRAINING CLASSES
- 16 WAYNE COMMUNITY COLLEGE
- 18 MOSTLY JUST SEMINARS
- 24 COLLEGE
- 33 FARRIS COLLEGE
- 37 COMMUNITY COLLEGE
- 39 MACOMB COMMUNITY COLLEGE
- 42 MARYGROVE COLLEGE
- 43 MADONNA UNIVERSITY
- 49 WAYNE STATE UNIVERSITY
- 55 THEY ARE OFFERED THROUGHOUT THE CITY.
- 57 I HAVEN'T DECIDED YET.
- 60 DENVER, COLORADO- CONTINUING EDUCATION IN STOCK AND FINANCIAL ISSUES PROVIDED BY COMPANY
- 64 MCCALL COMMUNITY COLLEGE
- 66 INSIDE THE COMPANY
- 74 THE ACTUAL JOB
- 77 AT THE JOB
- 78 FLIGHT TRAINING
- 80 WAYNE STATE COLLEGE
- 81 WAYNE STATE COLLEGE
- 87 THE COMPANY I WORK FOR OFFERS THE TRAINING. (P) BOTH AT THE SCHOOL AND AT THE COMPANY.
- 93 CFP CERTIFIED FINANCIAL PLANNER
- 94 MICHIGAN INSTITUTE OF AERONAUTICS
- 97 ON THE JOB
- 98 GENERAL MOTORS
- 107 PHOENIX, IN SOUTHFIELD, MI.
- 113 CLOSE COLLEGE IN GARDEN CITY
- 117 UNIVERSITY OF DETROIT
- 121 ALREADY OBTAINED AND CURRENTLY INTENDING TO GO TO COMPUTER SCHOOL.

Q13A -- WHERE ARE YOU DOING THAT TRAINING (RELATED TO YOUR CURRENT LINE OF WORK)?

- 122 AMERICAN INSTITUTE OF BANKING
- 128 MARYGROVE COLLEGE
- 134 WAYNE STATE COLLEGE AND WAYNE COMMUNITY COLLEGE
- 136 WAYNE STATE UNIVERSITY
- 138 DETROIT (P) CASINO SCHOOL
- 145 ROSS TECH (P) TO LEARN MORE ABOUT MACHINERY
- 148 ON THE JOB
- 281 HOME STUDY AND WORK
- 284 FORD MOTOR CO.

Q14A -- WHAT ARE THE ONE OR TWO TECHNICAL SKILLS THAT HAVE HELPED YOU THE MOST IN YOUR CAREER?

- 1 NONE
- 2 NONE. (P) I CAN'T THINK OF ANYTHING.
- 3 CPR. (P) CHECKING VITALS
- 4 MY OWN COMMON SENSE.
- 5 WELDING
- 6 COMPUTER KNOWLEDGE
- 7 MACHINIST
- 8 COMPUTER AND ELECTRONIC TRAINING
- 9 NONE
- 10 ABILITY TO HANDLE A FORKLIFT
- 11 CARPENTRY AND WELDING
- 12 SUBSEQUENT TRAINING AND PC SOFTWARE, MOSTLY COMPUTER SKILLS.
- 13 THE NATIONAL SAFETY COURSES THAT I TOOK THERE. (P) INDUSTRIAL HYGIENE. COMPUTERS (P) THAT'S IT
- 15 MATHEMATICAL SKILLS AND MY KNOWLEDGE IN COMPUTERS
- 16 I DON'T KNOW (P) MEDICAL SURGERY
- 17 TYPING AND COMPUTER SKILLS
- 18 HAVING AN EAR FOR THE CLIENT AND STILL FOCUSING ON WHAT THE COMPANY NEEDS.
- 19 BEING ABLE TO USE A COMPUTER. (P) KNOWING ABOUT AUTOMOBILE MECHANICS.
- 20 NONE. (P) THEY TOLD ME WHAT I HAD TO BE ABLE TO DO TO GET THIS JOB AND TO KEEP IT. (P) I JUST GOT BUSY AND TAUGHT MYSELF THE THINGS THAT THE COMPANY EXPECTED ME TO BE ABLE TO DO.
- 21 COMPUTER CLASSES OR TRAINING - ROUTE PLANNING DISPATCHES - MOST OF MY JOB IS PHYSICAL
- 22 COMPUTER OPERATIONS, TYPING, MEDICAL TERMS
- 23 COMPUTERS
- 24 COMMUNICATION AND TYPING SKILLS
- 25 ORGANIZATIONAL
- 26 COMPUTER SKILLS AND TELEPHONE SKILLS.
- 27 APRONS, NAPKINS, WASHROOM, DRYFOLD
- 28 COMPUTER PROGRAMMING
- 29 BLUEPRINT READING, MATH
- 30 BE ABLE TO BALANCE, AND KEEP UP WITH PEOPLE'S MERCHANDISE.
- 31 BEING ON THE COMPUTER; KEEPING UP WITH ZIP CODES; BEING ABLE TO KEEP UP WITH CHANGING ZIP CODES AND AREA CODES ON THE COMPUTER.
- 32 HEAVY EQUIPMENT
- 33 SHOCK LOADING

Q14A -- WHAT ARE THE ONE OR TWO TECHNICAL SKILLS THAT HAVE HELPED YOU THE MOST IN YOUR CAREER?

- 34 MECHANICAL SKILLS
- 35 COMPUTERS
- 36 COMPUTERS
- 37 COMPUTERS
- 38 BEING A SUPPLY CLERK AND COMPUTERS
- 39 MATH (P) NOTHING ELSE
- 40 I DON'T KNOW (P) NOTHING
- 41 NOTHING (P) JUST STANDING UP
- 42 COMPUTER OPERATIONS
- 43 COMPUTER KNOWLEDGE
- 44 TRAINING FROM MILITARY
- 45 TYPING
- 46 ENGINEERING
- 47 COMPUTERS
- 48 PEOPLE SKILLS; GOOD TIME MANAGEMENT
- 49 ANYTHING DEALING WITH COMPUTERIZED DRAFTING AND WORD PROCESSING
- 50 ELECTRICAL TRAINING AND TELECOMMUNICATIONS
- 51 COMPUTERS SKILLS
- 52 AUTOMOTIVE TRAINING AND ELECTRONICS
- 53 NONE
- 54 NONE
- 55 THE MASTERING OF THE COMPUTER AND SUPERVISORS ACADEMY COURSE.
- 56 I HAVE VERY GOOD COMMUNICATION SKILLS AND CUSTOMER SKILLS AND MARKETING SKILLS.
- 57 DECISION MAKING. (P) NOTHING ELSE (P) OH YEAH, I GUESS YOU COULD SAY THAT COMPUTER KNOWLEDGE HAS HELPED BECAUSE EVERYBODY USES COMPUTERS.
- 58 I CANT SAY THAT ANY PARTICULAR SKILL HELPED THE MOST. I GOT INTO PRINTING WHEN I WAS FIFTEEN AND I'VE BEEN DOING THAT EVER SINCE.
- 59 PRODUCT KNOWLEDGE; SHEER TALENT
- 60 COMPUTER SKILLS - FINANCIAL SOFTWARE CONTINUING EDUCATION IN FINANCIAL SKILLS SUCH AS TECHNOLOGY AND FINANCIAL TERMS
- 61 NO PARTICULAR SKILL JUST ASSEMBLY WORK
- 62 NOTHING. (P) NOTHING TECHNICAL ABOUT WALKING HOUSE TO HOUSE.
- 63 COMPUTERS (P) SKILL TRADES
- 64 KNOWLEDGE OF HANDS ON AND MATH
- 65 COMPUTERS (P) SECRETARIAL SKILLS
- 66 COMPUTER TRAINING AND TRAINING TO FIX COPIERS

Q14A -- WHAT ARE THE ONE OR TWO TECHNICAL SKILLS THAT HAVE HELPED YOU THE MOST IN YOUR CAREER?

- 67 CUSTOMER SERVICE EXPERIENCE; COMPUTER KNOWLEDGE
- 68 MICROSOFT AND LOTUS KNOWLEDGE
- 69 CARPENTRY, MASONRY
- 70 COMPUTER, HOSPITAL LANGUAGE.
- 71 RESISTANCE WELDING, TECHNIQUES AND SUCH.
- 72 NOT SURE.
- 73 COMPUTER SKILLS
- 74 REPORT WRITING, ABILITY TO HANDLE A FIREARM.
- 75 CAN'T THINK RIGHT OFF HAND.
- 76 COMPUTERIZED ACCOUNTING, WORD, EXCEL
- 77 COMPUTER
- 78 MECHANICS AND DESIGN
- 79 MANAGEMENT SKILLS
- 80 REMAIN FOCUSED
- 81 COMPUTERS
- 82 WELL COMPUTERS AND, UH I DON'T KNOW.
- 83 NONE REALLY (P) IT'S A VERY SIMPLE JOB
- 84 OBTAIN VITAL SIGNS, THERE ARE SO MANY SKILLS THAT IT'S HARD TO SINGLE OUT THE TWO MOST IMPORTANT. (P) ADMINISTER MEDICATION.
- 85 COMMUNICATION SKILLS, BOTH BY TELEPHONE AND COMPUTER.
- 86 MARKETING CLASSES AND COLLEGE COURSES. (P) COMPUTER TRAINING AND THINGS LIKE THAT.
- 87 BEING COMPUTER LITERATE AND COMMUNICATION SKILLS.
- 88 I GUESS READING. (P) THERE ARE NOT ANY OTHER TECHNICAL SKILLS I CAN THINK OF RIGHT OFF HAND.
- 89 NOTHING (P) IT'S A GOVERNMENT JOB
- 90 I DON'T KNOW
- 91 EDUCATION FROM HIGH SCHOOL, 2 YEARS OF COLLEGE.
- 92 COMPUTERS.
- 93 PROBLEM SOLVING, WORKING IN GROUPS.
- 94 MATH AND READING
- 95 COMPUTER KNOWLEDGE, MATH SKILLS, TYPING AND CLERICAL SKILLS
- 96 COMPUTER SKILLS, HEATING AND COOLING DEGREE
- 97 COMPUTER TRAINING
- 98 COMPUTERS
- 99 COMPUTER LITERATURE AND HIGH LOW LICENSE. (P) COMMON SENSE
- 100 I DON'T KNOW

Q14A -- WHAT ARE THE ONE OR TWO TECHNICAL SKILLS THAT HAVE HELPED YOU THE MOST IN YOUR CAREER?

- 101 COOKING; ORGANIZATIONAL
- 102 NONE EXCEPT MEMORIZING NUMBERS
- 103 SHIFTING GEARS; DRIVING THE TRUCK
- 104 PEOPLE AND COMPUTER SKILLS
- 105 COMPUTERS
- 106 PC SKILLS AND KNOWLEDGE
- 107 COMPUTERS
- 108 MATHEMATICS
- 109 COMPUTERS
- 110 TROUBLE SHOOTING; GOOD MECHANICAL APTITUDE
- 111 COMPUTER TRAINING; KNOWLEDGE OF GEOGRAPHY; TELEPHONE SKILLS; ABILITY TO LEAD A CONVERSATION
- 112 ELECTRONICS
- 113 MEDICAL DEALING WITH INJECTION, TELLING MENTAL STATE OF PEOPLE WITH RETARDATION.
- 114 SPATIAL PERCEPTION
- 115 THERE AREN'T ANY TECHNICAL THAT I REALLY USE AT MY JOB. (P) WELL UNLESS YOU WOULD CONSIDER WELDING A TECHNICAL SKILL.
- 116 NONE
- 117 MANAGEMENT (P) ADVANCED OPPORTUNITY
- 118 LEARNING THE COMPONENTS OF AN ENGINE AND COMPUTERS
- 119 COMPUTERS, TYPING, OFFICE SKILLS
- 120 LEARNING MORE FROM PREVIOUS JOB
- 121 1-REAL ESTATE LICENSE 2-REAL ESTATE TRAINING
- 122 COMPUTERS
- 123 MATH SKILLS
- 124 COMPUTERS AND DATA PROCESSING
- 125 NONE
- 126 NONE.
- 127 NONE I CAN THINK OF RIGHT NOW.
- 128 BASIC COMPUTER CONCEPTS AND MAINFRAME LANGUAGES.
- 129 COMPUTER SKILLS.
- 130 I CAN'T ANSWER THAT
- 131 COMPUTERS
- 132 TYPING
- 133 WELDING
- 134 COMPUTERS AND MATH

Q14A -- WHAT ARE THE ONE OR TWO TECHNICAL SKILLS THAT HAVE HELPED YOU THE MOST IN YOUR CAREER?

- 135 DEALING WITH PEOPLE
- 136 WELDING AND COMPUTERS
- 137 1-CHILD DEVELOPMENT SKILLS 2-DANCE CLASSES
- 138 LEARNING ELECTRONICS (P) NO, NOTHING ELSE
- 139 COMPUTER SKILLS AND INTERPERSONAL COMMUNICATIONS
- 140 I CAN'T THINK OF ANY.
- 141 MEDICAL TRAINING.
- 142 BASIC ELECTRICITY. (P) BEING A GOOD DRIVER I GUESS.
- 143 DATA PROCESSING
- 144 COMPUTERS
- 145 ALL, NONE SPECIFIC (P) DIFFERENT TYPES OF MACHINES
- 146 NOTHING IN PARTICULAR.
- 147 NONE.
- 148 NONE
- 149 MATH
- 150 MEDICAL TERMS AND COMPUTERS
- 151 DON'T KNOW
- 210 ANYBODY CAN DO IT. (P) I'M DRAWING A BLANK HERE.
- 231 COMPUTER LITERACY, AND LANGUAGE SKILLS. (BILINGUAL)
- 253 ACCOUNTING. (P) THAT'S IT.
- 275 COMPUTER SKILLS.(P) NO, NOTHING ELSE.
- 277 QUALITY CONTROL; INSPECTION INFORMATION.
- 281 ELECTRONICS
- 284 ELECTRICAL, EMISSION
- 287 BACKGROUND IN ELECTRONICS AND BACKGROUND IN SERVO HYDRAULIC CONTROL SYSTEMS. (P) THAT'S IT.
- 300 TECHNICAL SKILLS: SCIENCE, MATH, ANATOMY, ETC. COLLEGE MATERIAL.
- 303 EXPERIENCE. (P) THAT'S ALL, REALLY.
- 310 NO TECHNICAL SKILL REQUIRED.
- 343 CAKE DECORATING

APPENDIX D

Focus Group Verbatim Responses Career Pathways

The following are individual summaries of each participant's path to his or her current job. All are verbatim, but some have been edited for purposes of brevity.

1. 6:00 GROUP – AFRICAN AMERICANS

Customer Service Representative – “For me it started with my mother. My mother worked for Blue Cross for over 25 years. My sister worked there. Another sister worked there. I felt that I was obligated to Blue Cross because Blue Cross helped me go through college. I stay at Blue Cross because of what I saw as a kid Blue Cross did for my family, which allowed us to live a better life. Learned facilitator skills, management skills, business management skills at Blue Cross. They've allowed me to take classes to enhance myself.”

Team Coordinator – “I found about my job from the newspaper. The job where I was before that...I saw they were about to phase out. Before I was dealing with the government, now I'm on the other side. I went to a business school and from there it was basically on-the-job training. The business school was through JTPA (Job Training Partnership Act).”

Entertainer – “Actually, I switched careers a lot. I went to college a lot. I tried a lot of different things in addition to music because music hasn't traditionally been the type of career where you can sustain a family, make a living, get any kind of credit established, or anything like that. That's why in addition to doing music, the last 13-14 years I wasn't able to just do music. Organizational skills, writing skills, interviewing skills were all things learned in college that high school didn't prepare me for.”

Journeyman Pipefitter – “Luck is all it was. The idea was actually brought to me by an employer who saw that I had skills working with my hands and he asked me if I wanted to get into the union as a fitter. It was in my upbringing. We were taught from small children that you will have a job, this world owes you nothing and he (father) made it tough on us. We had a landscaping business...I felt like a galley slave at the time, but it paid off in the long run. My father was a school teacher and he said you either have to learn a skill or you have to go to college, plain and simple. I did the college first and then I thought I was in love. I dropped out of college and came home so I had to do something. I came home and I was a lifeguard for years. Being a lifeguard was fun, but it wasn't paying no money. I saw an ad in the paper for a fire extinguisher salesman. I would have done anything. I delivered Domino's. The owner of the company said, 'wait a minute.' He took some tools and put them on the table and asked me what they were. I pretty much told him what the tools were. I was prepared at the family level.”

Repossession Services – “Father Cunningham told me that if I didn’t like the way they repo-ed my car, go into the field and change it. That’s when I dropped out of Focus Hope. In adult ed...it was the summer...I said I’ll get my diploma...I had a whole summer...got nothing to do... I was heavy into drugs and drinking and one of my teachers told me “find something else to do.” So I was at home watching television and Focus Hope program came on and I decided to go to Focus Hope and so I started going to Focus Hope and you had to be drug free to go to Focus Hope so I had to quit everything I was doing and I was in Focus Hope and I was into machinist’s training program. It was good. I was okay with my grades, but I really didn’t like it because you know, I just didn’t like the getting up at 5:00 in the morning to get to school at 6:00, you in school all day and you get home and it’s 6:30, you got homework, go to bed and go right back to school, remind me of the ham factory and I didn’t like that. One day I was talking to Father Cunningham and he asked me how I liked the program. I told him I thought it was a good program, I just didn’t like getting up every morning. He said, well you have to find something you like to do. You can’t do things you want to do, you have to find things you like to do and that was part of the training in the fast track -- find an occupation that you like. My grandmother was sick and she was in the hospital and my stepfather came by and wanted me to ride by on a repo with him. He can’t read the VIN numbers...I didn’t like the way they repo-ed my car because they tore up my whole neighborhood just taking my truck. If they had knocked on my door, I’d have gave them the keys. I just figured that Father Cunningham was right; find something you like to do. I asked my stepfather if he needed any help and he said yeah, I could help him.”

Computer Programmer – “With me, I had an uncle who was kind of a (computer) hobbyist and he sort of did some work. When I was in high school, I spent some time over there and every chance I got I grilled him for every bit of information I could get out of him until I felt competent enough to go on my own. While I was in college, I used that to get a job doing similar stuff and there was a guy there I learned from. My computer programming skills was the result of my apprenticing under these two other guys. I had a cousin who was working in a company and they were about to start training people to do programming. He said, well, you look like you have pretty good competence and you could probably be better than me at this so I’m going to try to get you into this program. If it works, we’re going to start pulling a lot of people in. Actually, I learned a completely different set of skills than I already knew because I learned PC skills with my uncle and the guy I worked with. Then they taught me to be a mainframe programmer. That training program got me into the industry I’m in. (Need a degree to make more money) Not in this industry, no.”

Computer Programmer – “Up until that point, I was still wandering around trying to find a degree for about ten years. An opportunity came up in the industry for programmers to fix the Y2K problem. I learned programming at Compuware. They brought me in to train me to be a programmer. I had no prior computer skills for

the work I do now. There was a logic test. They tested your aptitude. Your analytical thinking. Got into company through my cousin."

Electrical Technician – "I didn't start off doing that. I wanted to go to art school, but I couldn't afford it. The only thing my parents would help me financially with respect to going to college would be something they could see that I could actually get a job doing to support myself. I chose the field of electronics. I was taking art classes on the side. I would take an electronics course, but I would take two arts courses. They (electronics courses) didn't do anything for me that I couldn't have done myself. I started at community college and got a two-year degree and then started working at places. A field from New York I read about was doing automotive testing. They're a government contractor so they were looking for minorities to do this work. Most people don't know how to do it and basically it's on-the-job training. I left there and happened to look in the newspaper and see Izaki was looking for someone...and they thought I was white because of the skills I had written down. First time I started with electronics is when I was 8 I used to wire cars. In terms of going to work and making money from it...helping my uncles do electrical work in peoples houses."

Office Manager/Accounting – "I've always had a job since I was 13. I wanted to be a math teacher until I found I had no tolerance for it. My family owned a small business and I would always go in, the little girl to answer the phone. I went to an institute to do some data programming. It was Detroit College of Business. They promised to train you for a number of months and then get you a job. I attended for a year. I went to college for a year. I did odds and ends for a long time...office jobs, restaurant jobs, whatever would get the money. Someone told me about the Detroit Business Institute. The coordinator called me back and told me she had something that would suit me very well. They then fired my supervisor and kept me.

Technical Writer – I started in junior high. I came from a single parent home with six girls. My mother taught us not to depend on a man. While I was in junior high, I started out typing, so by the time I was done with high school, I already had a job with the government doing clerical work. I got interested when word processors came out. I worked for the legal department of IRS and they had word processors. From there, I would just started picking up whatever I could. Then I got a permanent job with General Dynamics in the training department where they developed instructional training guides for tanks. When I was in temporary services, I learned a lot about graphics. When they started to see my skills, they started giving me new opportunities (at GD). I went into computer training at one of the largest training centers in the area and have developed training materials there.

II. 8:00 GROUP – WHITE SUBURBANITES

Court Clerk – “I’ve been there for nine years. Started office co-op. There was a part time position open and I applied and I was hired in and then there was full-time and a Clerk 1 and Clerk 2 and Clerk 3 and then there’s the supervisor position. Right now I’m a Clerk 3. I learned computer and typing skills in high school, but everything else I was trained there.”

Electrical Mechanic – “First became interested right out of high school. Basic skills going into it, but it’s a lot more advanced than what you learned in high school. You have to teach yourself and learn the job as you go. My auto teacher found me a job.”

Auto Mechanic – “When I started off, I was working with computers. I used to run a \$35 million bank in the computer room. Computer skills learned in high school. Now I work on cars. Total change strictly because of turmoil in the banking industry in the mid-80’s. When I was in high school, I built cars ...and always had that to fall back on. Switched at age 22.”

CAD Drafter -- “It probably goes all the way back to 7th grade and my first drafting class through junior high and high school kept up with it. I wanted to do architecture and stuff like that and then I went to mechanical drawing instead of architecture because I didn’t think I could make as much money in architecture. I didn’t set out to do what I do now, it just came about.”

Structural Test Technician – “Out of high school, I loved working with my hands so I got into manufacturing. I set up production machines for ten years. When I realized with the shrinking world, it was a dead end, I got out of that and stumbled into the testing field. I was strongly mechanical with good fabricating skills and that was got me in the door in the testing field. A lot of the things we do are prototyping things you won’t see until down the road 2001, 2002. Everything we build is for a prototype so you’ve got a lot of fabricating and hands-on stuff which has very much interested me and it was all on-the-job training. I’ve only got a couple of college courses...nothing near a degree. There’s a shortage of good skilled technicians. There are probably a handful of places I could go right now, drop a resume down and start work Monday morning. I’ve been with it for the next ten years.”

Stockbroker – “A twisted path. I started out in Fine Arts College and then left because I had a job offer to work for FTD that basically meant having the territory of the U.S. and Canada. I left that to train for temporary help services. From there I got a job as a sales director for a direct sales company and was training again – a regional sales force. That opened me up to take a job in a manufacturing company as the office manager and that went into managing one of their division areas so I got involved in bringing goods and services in from another country through customs and getting it out to a distribution network and then we would bring in distributors to train. Went back to school to become a certified applicator so I

could better train that position. Because I had construction skills and applicator skills and manufacturing skills, there was a position that opened up with a bank to go onto their team that put together their bank headquarters building. So I came onto the design construction team as a liaison to the bank people and once that building was built and the people were in, then I was the assistant manager for the facility. Because I became an officer of the bank, and we were talking about the mortgage crunch, I went back to school to become an appraiser. They needed people to be on loan committee, so I learned how to do that and then underwriting. Then I started getting securities licenses.”

Graphic Designer – “I come from a line of artists, so I pretty much was born with the skill. Since I was a little kid old enough to hold a pencil I’ve been drawing. I have an older brother who was going to school for commercial art. I thought that sounded so in high school I had a three hour class everyday at the Livonia Career Center that was focused on commercial art where you learn how to apply your art skills constructively towards the market. Once I graduated, I had art background, but went to college. I decided quickly that I would rather draw than crunch numbers or push a pencil all day.”

Network Engineer – “I’ve been a techno-geek all my life...since PacMan came out. I started programming on my dad’s Atari and I had an older brother who did some programming, so he taught me some things. I just grew as the industry grew. I met a buddy in high school and we used to tinker and hack a little. No computing in high school. Out of school, I worked the Jungle Cruise for Disney. My high school computer buddy got a job doing computer consulting in Saginaw. He got me in the door. I learned a lot on the job. They sent me through a Novell training course and I got my Netware Engineer certification. I saw a job opening at Farmington Hills for a Network Coordinator.

Auto Lamp Designer – “Ford used to have an open house every year. I must have been in 6th or 7th grade and computers were just coming on the scene and my dad was one of the first guys to design on these computers. He took us in and put up a fender on the screen and he spun it around and colored it in and I said ‘man that’s what I want to do.’ I went and took drafting all through high school, got out of high school and went to college for a two-year degree. I started working in design making good money. All of a sudden, you needed a degree, so I went back and finished my Associate degree. To move up in my job, I was in job shops at the time, so you went from company to company to build up your salary. In order to do that, I took all these specialized courses on my own time. I took 10 or 15 of them. I paid for all of those – a couple thousand dollars by the time I was done. I built up my skill level and rate real quick. Now it seems like the only thing I do is learn new computer systems...as soon as I can that’s the trick.”

APPENDIX E
Focus Group Participant Profile

African American Group (6:00 PM)									
Occupation	Employer	Sex	Age	Education	High School	Income	Union		
Team Coordinator	Cigna	F	33	High School	Mumford	\$30- \$39K	No		
Technical Writer		F	37	Some College	Cooley	\$30- \$39K	No		
Entertainer	Detroit Symphony Orchestra	F	38	Some College	Cooley	\$30- \$39K	No		
Office Manager	MI Roll-Form	F	31	Some College	Cooley	\$30- \$39K	No		
Computer Programmer	Compuware	M	30	Some College	Cass Tech	\$30- \$39K	No		
Pipefitter	Fire Defense Equipment Co.	M	36	Some College	Martin Luther King	\$40- \$59K	Yes		
Electrical Technician	Izaki, North America	M	34	Some College	Unknown	\$40- \$59K	No		
Software Developer		M	30	Some College	Uknown	\$40- \$59K	No		
Repossession Services	Family Business	M	31	High School	Northern	\$25- \$39K	No		
Customer Service Representative	BCBS	M	32	Some College	Chauncy (?)	\$25- \$39K	Yes		

Non-Black Group (8:00 PM)									
Occupation	Employer	Sex	Age	Education	High School	Income	Union		
Mechanical Designer	Advanced Assembly	M	33	Some College	Plymouth-Canton	\$30-\$39K	No		
Network Engineer	Farmington Schools	M	29	SomeCollege	Farmington	\$40-\$59K	No		
Mechanic	Suburban Motors	M	33	High School		\$60K+	No		
Electrical Technician	Hamilton Chevrolet	M	28	Some College	Warren Mott	\$30-\$39K	No		
Auto Lamp Designer	Ford Motor	M	34	Some College	Edsel Ford	\$60K+	No		
Structural Test Technician	Ford Motor	M	38	High School	Robishard	\$40-\$59K	No		
Stock Broker	First Chicago-NBD	F	40	SomeCollege	Dondero	\$60K	No		
Graphic Designer	Envision	M	29	Some College	Northville	\$30-\$39K	No		
Court Clerk	District Court	F	28	SomeCollege	Southfield	\$30-\$39K	No		
Political Director	Oakland County GOP	M	23	Some College	Lakeland	\$30-\$39K	No		