

THE PREVAILING WAGE AND OCCUPATIONAL SAFETY

PART I. Safety on the Job: The Prevailing Wage Track Record**

Of the many positive ripple effects created by prevailing wage laws, perhaps the most significant is the impact on worker safety. Construction is a risky business, and workers face the threat of injury, occupational disease, or death on the job everyday. Studies have shown that prevailing wage laws encourage better training and the use of more experienced workers--both of which contribute to a safer work environment.

This is important not only to members of our workforce but also to their families. Higher accident rates also increase workers' compensation costs and decrease productivity. The prevailing wage law and other laws that improve construction worker safety assure safer and more productive construction sites for our public works projects.

The Dangers of Construction Work

Construction workers are exposed daily to a myriad of hazards including dangerous chemicals, the use of heavy machinery in tight places, blasting and flying rock, shocks from exposed wiring, falls, and excavation sites that collapse from heavy rain, just to name a few. In 1995, falls were the largest single category of fatal accidents in the construction industry, accounting for 31 percent of all fatalities and 21 percent of all injuries:

- Nearly 10 percent of all fatalities in construction are the result of falls from scaffolds. Many of these falls could have been prevented. (1) Falls from scaffolds are often caused by improper installation, improper operation, defective equipment, insufficient worker safety training, or failure to provide or use personal fall-protection equipment. (2)
- State and federal regulations now require that a competent person be in charge of scaffold erection, but it is still the responsibility of employers to send their workers to receive the proper training and to monitor the work site for compliance.
- Electrocutions, especially from crane contact with overhead power lines, are another hazard that can be avoided with proper safety precautions. (3) Proper safety training can make the difference between a safe worksite and one where workers are prone to accidents.

Direct and Indirect Costs of Construction Site Injuries

Construction accidents impact more than the injured workers and their families. Accidents increase the cost of doing business by raising workers' compensation rates and reducing productivity. The construction industry has a higher level of workers' compensation payments than any other industry in America. Although construction workers comprise only 5 to 6 percent of the workforce nationally, workers' compensation expenditures for construction injuries are 15 percent of the total. (4)

The loss of a skilled employee with experience on the project also has an impact on the progress and cost of the job, including days lost from work, time to train replacement workers, shutdowns due to damage from the accident, and other factors that affect productivity. Indirect employer costs for on-site injuries include the following: (5)

- Lost productivity;
- Job shutdown at the time of injury;
- The injured worker, at the time of the injury;
- The injured worker's reduced capacity upon return to work;
- Co-workers at the time of injury, watching and helping the injured;
- Co-workers who are short-handed following the injury;
- Co-workers who must train a replacement worker;
- Management time hiring or retraining a replacement worker;
- Management time investigating and reporting the incident;
- Fines;
- Production delays;
- Damaged equipment and the costs of repairing or replacing it;
- Lawsuits;
- Damage to the company image and reduced company competitiveness;
- Higher workers' compensation premiums; and
- Reduced worker morale.

The Prevailing Wage Law Improves Safety

While many accidents at construction sites (including falls and electrocutions) can be reduced with safety training and enforcement of safety regulations, there are many interrelated factors that contribute to a safer worksite. Studies have shown that the existence of prevailing wage law can dramatically improve safety. Economist Norman Waitzman, co-author of a study on safety issues related to prevailing wages, identifies four reasons for this positive relationship: (6)

- Prevailing wage laws generally require higher wages and benefits; workers who are paid more have the confidence to demand safer conditions.
- Prevailing wage laws discourage small contractors who lack proper training procedures from bidding on public works projects. U.S. Department of Labor figures show that larger firms have lower accident rates. Waitzman hypothesizes that this is due to economies of scale in the investment in safety training, and perhaps in the increased likelihood of an OSHA inspection. Data from the National Institute for Occupational Safety and Health confirms that few small construction companies have formal safety and health programs. (7) Many contractors believe the prevailing wage laws tend to screen out of the bidding process small contractors who don't have the expertise necessary to do the work and do it safely. Certain projects need specialized people and prevailing wage

laws, as a practical matter, ensure that only contractors with trained employees will bid for the job.

- Age and experience offset the advantage of youthful agility where safety is concerned. Prevailing wage laws ensure payment of at least the prevailing journey wage on a project, encouraging contractors to hire and keep experienced employees. Consistent with Waitzman's conclusion, an OSHA study of workers' compensation rates showed that experience increases worker safety. The study concluded that the rate of job site injuries "decreases substantially as length of service increases." (8)
- The relationship between prevailing wage laws and unionization is also a safety factor, since unions provide more formal training (safety and otherwise) than the non-union sector. Waitzman also notes that unions generally provide more avenues for redress of worker complaints and concerns about safety.

Peter Philips, an economist at the University of Utah, studied the effect of prevailing wage laws in many states. He analyzed the increase in accident rates in Kentucky after its law was seriously weakened and found that factors contributing to the increase included cutbacks on safety resulting from the ensuing cutthroat bidding process, worker turnover and a decrease in skilled workers due to the payment of lower wages, and a reduced investment in training. Waitzman and Philips also isolated many of the factors enhanced by the prevailing wage law, which combine to create a safer work environment. The National Institute for Occupational Safety and Health echoes the conclusion that a variety of factors contribute to job place safety:

Assuring safety and health in construction is complex, involving short term worksites, changing hazards, and multiple operations and crews working in close proximity. (9)

Safe and productive construction sites require a commitment to use skilled and experienced contractors and workers. When a state repeals its prevailing wage law, it replaces an experienced workforce that is well trained and paid career wages and benefits with a workforce that is unskilled, is paid low wages, and has a high turnover rate. The resulting decrease in safety and productivity should not be surprising.

Repeal of Prevailing Wage Laws Leads to Increased Accident Rates

Economists have been able to measure the impact of prevailing wage laws on worker safety by comparing reported accident rates before and after states have repealed their laws. States that repealed their prevailing wage laws faced an increase in accident rates ranging between 11 and 21 percent. A 1995 study at the University of Utah compared accident data for states in four categories:

- States with prevailing wage laws;
- States that never had a prevailing wage law;

- Before repeal for states that repealed their laws; and
- After repeal for states that repealed their laws.

The authors analyzed reported accident rates for plumbers and pipefitters, a specialty construction trade that has injury rates in the mid-range for construction. On average, after repeal of a prevailing wage law the accident rate increased by about 15 percent. They also found that states that never had a prevailing wage law had accident rates that were 5 to 9 percent higher than states with prevailing wage laws. (10)

One of the economists involved in the first study, Professor Waitzman, later expanded the analysis to include all construction trades.¹ Waitzman's study also showed a strong relationship between prevailing wage laws and reduced accident rates:

The absence of prevailing wage laws is associated with more than a 16 percent increase in the number of injuries per 100 workers relative to strong prevailing wage laws. (11)

Waitzman also measured the impact on states according to the strength of their prevailing wage law. His results show that among states with prevailing wage laws, the accident rate is lowest where the prevailing wage laws are the strongest. Repeal states reported a 16-percent higher accident rate than strong-law states. Weak-law states reported a 14.3-percent higher accident rate than strong-law states. Average-law states reported an 8.2-percent higher accident rate than strong-law states.

Similar results were found in Kansas and Kentucky. After repeal of the Kansas prevailing wage law, the serious injury rate for the construction industry rose by 21 percent. (12) In Kentucky, during a period when the law was suspended for school construction and certain municipal contracts, serious injuries per construction worker increased by 11 percent when compared to the six years prior to the suspension of the law.²

Conclusions

Prevailing wage laws lead to lower accident rates and safer work sites than in states that have repealed their prevailing wage laws. Based on the experience of other states, any significant weakening of a state's prevailing wage law would cause an increase in accident rates on construction sites by about 8 percent, with a 5 percent increase in the rate of severe injuries. (13) If a state's law was not just weakened but repealed, accident rates could rise by about 16 percent.

¹ Norman J. Waitzman, *Worker Beware: The Relationship Between the Strength of State Prevailing Wage Laws and Injuries in Construction, 1976-1991*. Waitzman used statistical analysis to isolate regional and other effects including average rainfall and levels of unemployment; data comes from state reports to the U.S. Department of Labor.

² Peter Philips, *Kentucky's Prevailing Wage Law: Its History, Purpose, and Effect*, pp. 82-86. The law was reinstated for schools and municipalities in 1996.

As Professor Waitzman has cautioned:

Any legislation which acts to weaken state prevailing wage laws should explicitly acknowledge and consider the significant human cost in worker injury alongside any purported economic benefit. (14)

Construction sites are inherently dangerous places. Skilled workers with proper safety training and substantial experience can reduce these risks substantially. Prevailing wage laws encourage the use of skilled and experienced workers and facilitates their training. States with good prevailing wage legislation have lower construction site accident rates and fatalities, and more moms and pops that get to go home to their kids at night alive and well.

ENDNOTES

** Excerpted from Michael F. Sheehan, Robert E. Lee, and Lisa Nuss. *Oregon's Prevailing Wage Law: Benefiting the Public, the Worker, and the Employer* (Chapter 7). (Portland, Oregon: Oregon and Southwest Washington Fair Contracting Foundation, 2000).

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2. National Institute for Occupational Safety and Health, *NIOSH Issues Nationwide Alert on Dangers of Working from Scaffolds* (January 4, 1993).
3. National Institute of Occupational Safety and Health, *NIOSH Facts: Construction Safety and Health* (July 1996).
4. National Institute of Occupational Safety and Health, *Construction Safety and Health*.
5. *The Construction Chart Book: The U.S. Construction Industry and Its Workers*, 2nd edition (The Center to Protect Workers' Rights, April 1998), citing Jimmie Hinze, *Indirect Costs of Construction Accidents* (Austin, Texas: Construction Industry Institute: 1991).
6. Norman J. Waitzman, *Worker Beware: The Relationship Between the Strength of State Prevailing Wage Laws and Injuries in Construction, 1976-1991* (n.d.), pp. 1-3.
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8. Mangum, Philips, Waitzman, and Yeagle, *Losing Ground*, p. 58, citing C. Culver, M. Marshall and C. Connolly, *Construction Accidents: The Workers' Compensation Database, 1985 -1988* (Washington D.C.: OSHA Office of Construction Engineering, 1992).
9. National Institute of Occupational Safety and Health, *Construction Safety and Health*.
10. Mangum, Philips, Waitzman, and Yeagle, *Losing Ground*, pp. 57-63.
11. Waitzman, *Worker Beware*, p. 7.
12. Philips, *Kansas and Prevailing Wage Legislation*, pp. 39-45.
13. Waitzman, *Worker Beware*, p. 8.
14. *Ibid.*

PART II. Michigan – The Prevailing Wage Saves Lives, Limbs, and Livelihoods

During the decade of the 1990's, Michigan enjoyed an unprecedented period of prosperity and real growth. Nowhere was this more evident than in the state's construction sector, which grew at such a pace that the state earned the coveted ranking of "No. 1" from Site Selection magazine for an unprecedented five straight years. (The award is presented to the state which ranks first in the amount of new construction by size/value.) Considering the fact that Michigan ranks only 9th in population, the award recognizes an exceptional effort within the state over a long period of time (beginning in the latter part of the 1990's) when, for a combination of reasons, Michigan led all other states including California, New York, Texas, etc. in new construction.

In turn, this rapid growth presented the state's construction industry with an ever increasing number of challenges including:

- financing the prolonged boom,
- taking advantage of new techniques and technologies, and
- attracting and keeping a large pool of experienced workers -- especially those in the specialty trades needed to build the ever more complex and innovative buildings, factories, and other structures to be located in our state.

As can be seen in the accompanying tables, Michigan's construction workforce grew significantly -- especially after 1996. However, as identified in the tables, there was also an increasing amount of difficulty managing safety on construction sites. For instance, from 1996 to 1997 nonfatal injury rates increased in almost every type of construction (SICs 15-17). Secondly, not only was 1997 reaching toward setting a record pace for nonfatal injuries and time off work, but it also had the distinction of recording a doubling of the number of fatal construction accidents from the previous year. Specifically, in 1996 there were 17 "program-related" fatal construction accidents listed by MIOSHA. In 1997, that number jumped to 34.

And, with the construction industry running flat out, certainly everyone expected more the same -- if not worse -- in 1998. ***Yet that is exactly the opposite of what happened!***

In fact, not only did 1998 show a substantial reduction to 23 "program-related" fatal accidents, but the nonfatal injury incident rates dropped nearly across the board in almost every construction SIC including most specialty trades. As illustrated in the following tables, that trend continued in 1999. *By contrast, while the nation was also experiencing fairly strong growth in many areas of the country, in the construction sector there was almost no change in the fatality rates nor in the nonfatality injury rates.*

That anomaly brought into question, the nature of the reason for the significant drop in Michigan's rates as compared to the national statistics. The question is especially perplexing in light of the fact that a more complete study of the state's safety records during that period show that

- 1) The state's BSR (Bureau of Safety and Regulation) had reached its nadir in terms of numbers of construction sector inspectors in the field, funding, and other preventive efforts,
- 2) There were no statewide initiatives nor proactive reasons for the change.

However, there was one event which was significant to Michigan's construction industry but occurred in no other state: the reinstatement of the state's prevailing wage law which had been suspended since December 1994. The suspension had come about as the result of a federal litigation claim that the state's prevailing wage law was preempted by ERISA. The finding of the federal district court had favored the Plaintiff and the judge had ordered the state's prevailing wage law suspended pending appeal. Thus, It remained inapplicable to state and local construction projects for more than 2½ years until July 1997, when the U. S. 6th Circuit Court of Appeals reversed the lower court's decision and ordered the law reinstated.

Yet, although the prevailing wage law was in effect for nearly half the year, as noted above, 1997 stands as a year of tragic consequences to our state's construction workers. As such, it would seem on its face to raise a red flag as to the efficacy of the prevailing wage act as the brake on the trends previously identified.

However, there are compelling arguments to explain the "why" of this faulty first impression.

- 1) While the Appeals Court Decision reinstated the prevailing wage law, **that *by itself* was not and did not induce an immediate change in the way the industry had come to operate.**
- 2) The reason, quite simply, is that a judicial action is almost the opposite of legislation. For instance, in comparison, by the time legislation becomes law, it's assumed that people a) are already well aware of its contents, b) have made changes in anticipation of its going into effect, and, c) *most certainly*, do not expect that it will become inapplicable only a short time later. However in the judicial process that brought about the reinstatement of the prevailing wage law,
 - a) There was no anticipation of the Appeals Court Decision coming when it did -- more than 2½ years after the District Court Decision and suspension of the law had gone into effect.
 - b) *As an Appeals Court Decision, the expectation was that it would be appealed to the Supreme Court and that*
 - c) *The Charging Party would seek and receive an immediate injunction making the prevailing wage again inapplicable.*

Therefore, although the law was "technically back in effect," there was little (if any) change noticeable -- either in trying to enforce its wage provisions or, much less, any other aspects of the law such as the effects described above.

- 3) In fact, it was not until after the decision was made to not appeal the Appeals Court Decision, that the changes noted above began to take place. And since that decision only occurred late in the year, taking the prevailing wage law back into account did not really begin until after the beginning of 1998.
- 4) Because of the long lead time in construction, the changes brought about by having the prevailing wage law “really back in effect” were likely not fully in effect until well into 1998. And the changes brought about in 1998, would, of course, only then have increased the amount of safety training, attracted/kept more experienced workers back into the workforce etc. Therefore, it could be expected that the reinstatement of the prevailing wage act would have had an even more pronounced effect the following year.

And that, in effect, is exactly what happened. (See Tables 1 – 4; Glossary of Terms)

- **Table 1 – Michigan v. National Construction Industry (Overall)
SIC Injury Incidence Rates Comparisons 1997 – 1999**
- **Table 2 -- Michigan v. National Construction Industry (SICs 15, 152, 154)
SIC Injury Incidence Rates Comparisons Between 1997 – 1999**
- **Table 3 – Michigan v. National Construction Industry (SICs 16, 162)
SIC Injury Incidence Rates Comparisons 1997 – 1999**
- **Table 4 -- Michigan v. National Construction Industry (SICs 17, 173--177)
SIC Injury Incidence Rates Comparisons Between 1997 – 1999**

On the one hand **and in light of the above**, the tables following this article can be viewed as fairly self explanatory. However, there is also no question that further research is needed. Needed to

- 1) Determine to what degree the prevailing wage act was one--if not the principal causal factor--of the significant improvement in the safety records of our state's construction industry,
- 2) Better identify what changes were brought about – both by suspending *and* reinstating the prevailing wage law, and
- 3) Determine how many more workers would be killed and injured if Michigan's prevailing wage act was actually to be repealed at some future time.

**Table 1 – Michigan v. National Construction Industry (Overall)
SIC Injury Incidence Rates Comparisons 1997 – 1999 (BLS*)**

YEAR	Annual average employ (000'S)	Michigan Nonfatal Injury IRs Total	LWCs Injuries Total	LWCs Injuries Days away from work	Injuries Cases without lost workdays	YEAR	Annual average employ (000'S)	National Nonfatal Injury IRs Total	LWCs Injuries Total	LWCs Injuries days away from work	Injuries Cases without lost workdays
MI-CONST OVERALL						NAT-CONST OVERALL					
1997	177.3	10.0	4.4	3.8	5.6	1997	5,637.1	9.3	4.4	3.6	5.0
1999	193.9	8.0	3.5	2.8	4.6	1999	6,337.3	8.4	4.1	3.3	4.3
% Diff		-20.0%	-20.5%	-26.3%	-17.9%	% Diff		-9.7%	-6.8%	-8.3%	-14.0%

**Table 2 -- Michigan v. National Construction Industry (SICs 15, 152, 154)
SIC Injury Incidence Rates Comparisons Between 1997 – 1999 (BLS)**

YEAR	Annual average employ (000'S)	Michigan Nonfatal Injury IRs Total	LWCs Injuries Total	LWCs Injuries Days away from work	Injuries Cases without lost workdays	YEAR	Annual average employ (000'S)	National Nonfatal Injury IRs Total	LWCs Injuries Total	LWCs Injuries days away from work	Injuries Cases without lost workdays
MICH 15 - General building contractors						NAT 15 - General building contractors					
1997	40.7	10.6	4.0	3.6	6.6	1997	1,309.1	8.4	3.7	3.1	4.7
1999	43.7	6.2	2.5	1.9	3.8	1999	1,453.3	7.9	3.6	2.9	4.3
% Diff		-41.5%	-37.5%	-47.2%	-42.4%	% Diff		-6.0%	-2.7%	-6.5%	-8.5%
MICH 152 - Residential building contractors						NAT 152 - Residential building contractors					
1997	24.1	10.0	3.4	3.2	6.6	1997	678.3	6.9	3.2	2.9	3.7
1999	26.2	4.3	1.5	1.3	2.7	1999	774.0	7.3	3.5	3.0	3.8
% Diff		-57.0%	-55.9%	-59.4%	-59.1%	% Diff		5.8%	9.4%	3.4%	2.7%
MICH 154 - Nonresidential building contractors						NAT 154 - Nonresidential building contractors					
1997	16.3	11.1	4.8	4.0	6.3	1997	603.9	10.1	4.3	3.2	5.9
1999	17.2	8.9	3.8	2.9	5.2	1999	649.0	8.8	3.8	2.9	5.0
% Diff		-19.8%	-20.8%	-27.5%	-17.5%	% Diff		-12.9%	-11.6%	-9.4%	-15.3%

**Table 3 – Michigan v. National Construction Industry (SICs 16, 162)
SIC Injury Incidence Rates Comparisons 1997 – 1999 (BLS)**

YEAR	Annual average employ (000'S)	Michigan Nonfatal Injury IRs Total	LWCs Injuries Total	LWCs Injuries Days away from work	Injuries Cases without lost workdays	YEAR	Annual average employ (000'S)	National Nonfatal Injury IRs Total	LWCs Injuries Total	LWCs Injuries days away from work	Injuries Cases without lost workdays
MICH 16 - Heavy construction, except building						NAT 16 - Heavy construction, except building					
1997	13.4	10.3	4.7	4.3	5.7	1997	791.9	8.6	4.2	3.3	4.4
1999	15.0	11.1	5.1	4.2	5.9	1999	860.0	7.6	3.7	2.7	3.9
% Diff		7.8%	8.5%	-2.3%	3.5%	% Diff		-11.6%	-11.9%	-18.2%	-11.4%
MICH 162 - Heavy construction, except highway						NAT 162 - Heavy construction, except highway					
1997	9.8	9.5	4.7	4.3	4.9	1997	557.1	8.1	4.0	3.2	4.2
1999	10.7	11.5	5.6	4.6	5.9	1999	691.5	7.1	3.6	2.7	3.5
% Diff		21.1%	19.1%	7.0%	20.4%	% Diff		-12.3%	-10.0%	-15.6%	-16.7%

**Table 4 -- Michigan v. National Construction Industry (SICs 17, 171, 173--177)
SIC Injury Incidence Rates Comparisons Between 1997 – 1999 (BLS)**

YEAR	Annual average employ (000'S)	Michigan Nonfatal Injury IRs Total	LWCs Injuries Total	LWCs Injuries days away from work	Injuries Cases without lost workdays	YEAR	Annual average employ (000'S)	National Nonfatal Injury IRs Total	LWCs Injuries Total	LWCs Injuries days away from work	Injuries Cases without lost workdays
MICH 17 - Special trade contractors						NAT 17 - Special trade contractors					
1997	123.2	9.8	4.5	3.9	5.2	1997	3,536.0	9.9	4.7	3.9	5.2
1999	135.2	8.2	3.6	2.9	4.7	1999	4,024.1	8.8	4.4	3.5	4.4
% Diff		-16.3%	-20.0%	-25.6%	-9.6%	% Diff		-11.1%	-6.4%	-10.3%	-15.4%
MICH 171 - Plumbing, heating, air-conditioning						NAT 171 - Plumbing, heating, air-conditioning					
1997	28.1	11.4	3.9	3.3	7.5	1997	793.6	11.1	4.7	3.6	6.4
1999	30.9	8.7	2.2	1.8	6.4	1999	886.5	10.0	4.4	3.5	5.6
% Diff		-23.7%	-43.6%	-45.5%	-14.7%	% Diff		-9.9%	-6.4%	-2.8%	-12.5%
MICH 173 - Electrical work						NAT 173 - Electrical work					
1997	24.1	8.2	2.7	1.9	5.6	1997	677.9	9.4	3.7	3.0	5.7
1999	26.9	7.4	3.1	2.3	4.3	1999	794.2	7.7	3.4	2.8	4.3
% Diff		-9.8%	14.8%	21.1%	-23.2%	% Diff		-18.1%	-8.1%	-6.7%	-24.6%
MICH 174 - Masonry, stonework, and plastering						NAT 174 - Masonry, stonework, and plastering					
1997	13.4	9.3	5.6	5.5	3.7	1997	461.6	10.3	5.5	4.6	4.9
1999	14.8	7.7	3.8	3.1	3.9	1999	535.5	9.5	5.0	4.3	4.5
% Diff		-17.2%	-32.1%	-43.6%	5.4%	% Diff		-7.8%	-9.1%	-6.5%	-8.2%
MICH 175 - Carpentry and floor work						NAT 175 - Carpentry and floor work					
1997	11.8	13.3	6.3	5.1	7.0	1997	255.6	12.1	5.8	5.0	6.3
1999	12.6	9.0	3.5	3.5	5.5	1999	301.3	10.8	5.2	4.2	5.6
% Diff		-32.3%	-44.4%	-31.4%	-21.4%	% Diff		-10.7%	-10.3%	-16.0%	-11.1%
MICH 176 - Roofing, siding, and sheet metal work						NAT 176 - Roofing, siding, and sheet metal work					
1997	7.6	15.4	9.4	7.2	5.9	1997	231.8	10.1	5.6	4.9	4.6
1999	7.7	12.8	6.9	5.7	5.9	1999	244.8	10.9	6.4	5.3	4.5
% Diff		-16.9%	-26.6%	-20.8%	0.0%	% Diff		7.9%	14.3%	8.2%	-2.2%
MICH 177 - Concrete work						NAT 177 - Concrete work					
1997	11.3	8.7	6.0	5.2	2.7	1997	285.7	8.6	5.0	4.2	3.6
1999	12.1	7.6	4.5	3.7	3.1	1999	325.8	8.3	4.7	3.6	3.7
% Diff		-12.6%	-25.0%	-28.8%	14.8%	% Diff		-3.5%	-6.0%	-14.3%	2.8%

GLOSSARY OF TERMS

***Bureau of Labor Statistics (BLS)** BLS was the source for all year specific values in each table.

BLS Definitions

SIC – Standard Industrial Classification

Three broad types of construction activity are covered: (1) building construction by general contractors or by operative builders; (2) heavy construction other than building by general contractors and special trade contractors; and (3) construction activity by other special trade contractors.

- Building construction general contractors are primarily engaged in the construction of dwellings, office buildings, stores, farm buildings, and other building construction projects. (SICs 15, 152, 154)
- General contractors and special trade contractors for heavy construction other than building are primarily engaged in the construction of highways; pipelines, communications and power lines, and sewer and water mains; and other heavy construction projects. (SICs 16, 162)
- Special trade contractors are primarily engaged in specialized construction activities, such as plumbing, painting, and electrical work, and work for general contractors under subcontract or directly for property owners. (SICs 17, 171, 173-177) [Note: SIC 172 was not tracked by BLS for Michigan.]

Incidence Rates (IRs) –

Incidence rates represent the number of injuries per 100 full-time workers and were calculated as $(N/EH) \times 200,000$ where

N	= number of injuries
EH	= total hours worked by all employees during the calendar year
200,000	= base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

LWCs – Lost Workday Cases

- Total lost workday cases involve days away from work, or days of restricted work activity, or both.
 - Days-away-from-work cases include those which result in days away from work with or without restricted work activity.
-