Construction + Ergonomics = A Non-Traditional Focus for a Top 20 U.S. Contractor

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Introduction to Walsh

The Walsh Group has practiced general building construction since its foundation in 1898 by Matthew Myles Walsh. Currently in its fourth generation of leadership, the firm has been a family-held business since that time. In order to facilitate national expansion efforts, Walsh Construction was incorporated in 1949, and Archer Western was incorporated in 1983. Each company has experience with a wide variety of building, civil, and transportation sectors including: wastewater and water treatment plants, rapid transit, highway and bridgework, educational facilities, warehouse/distribution facilities, athletic facilities, correctional facilities, office, design-build, and more. The Walsh Group has invested over $450 Million in capital equipment and regularly employs over 5,000 engineers and skilled tradesmen.

Walsh Construction Profile
Walsh Construction Company is a Chicago-based general contracting, construction management, and design-build firm. Walsh is recognized as one of the nation’s top 15 contractors according to Engineering News-Record (ENR). The firm has experience with a wide variety of building, civil, and transportation sectors. Maintaining regional offices across North America, Walsh Construction operates using union labor and union subcontractors.

Northeast Region Profile
Walsh’s Northeast Region is comprised of regional offices in Pittsburgh, PA and Boston, MA. Both offices focus primarily on heavy civil construction projects in the transportation and water/wastewater industries. In 2013, this region was working on nine separate, significant bridge projects contributing to the Walsh Group’s ENR Ranking of No. 1 among the largest bridge builders in the United States.

In the Northeast Region Heavy Civil, we self-perform approximately 90 percent of the work in our highway and bridge sectors. This equates to over 2.2 million work-hours annually by more than 750 Walsh Employees. This work includes:

- deep foundations
- pile driving
- excavation
- reinforcing steel installation
- concrete formwork
- concrete placement
- underground pipe
- steel erection

Our employees work year round through some of the toughest conditions encountered in the United States. Whether it is the mountainous terrain of Western and Central Pennsylvania or the swift estuaries and rivers along the Northern Coast of Massachusetts and New Hampshire, there is no shortage of challenging situations our teams encounter. Add to these challenges a steady stream of drivers with road rage, texting motorists, and frequent, harsh winter road conditions, you might ask why anyone would want to take on this type of work.

Safety
The Walsh Group’s greatest concern is the safety of our workforce. Our mission is to set the highest standards of quality and safety. The Walsh Group performs approximately 13-14 million work hours annually, spread over approximately 30 different states. Creating the right safety culture at our jobsites continues to be one of our highest corporate goals. We are continually instilling the responsibility in all our employees that they have the right to have and the duty to prevent an unsafe work place. We are fully committed to our goal of, “No One Gets Hurt.”

Why Ergonomics?

Why Ergonomics + Construction Is a Non-Typical Pairing
Ergonomics is not a focus in construction for many reasons. Here are a few industry-wide, commonly known or stated reasons as to why ergonomics is not typically a focus in construction:

1. Ergonomics is a relatively new science that has been applied to offices and manufacturing for some years. Although buildings and bridges can be built in the blink of an eye, construction can be a slow industry to change.
2. Ergonomics has a feel-good nature, which is foreign to most people in the construction industry. The ideal of hard, physically demanding work still precipitates throughout the industry. This physically demanding work is almost a rite of passage, and the ‘old school’ hardened construction workers may not always be excited to see an easier way to do a task they toiled through in their past.
3. Ergonomics costs money. The construction industry can be near-sighted. The return on investment (ROI) is hard to demonstrate in a field that has not much history in construction.
4. The ROI is particularly difficult to prove in construction because most construction workers are not long-term employees for any certain company. Most workers are employed by a company in the geographical region where the work is taking place, or where they call home. Once the contractor is done with its work, the employee hires on with another outfit doing work in the area. This leads to difficulty proving an ROI for any training as employees are not retained for many years. Also, an injury to one company is challenging to manage and contain cost with employees coming and going so quickly between companies.
5. OSHA requires safety training and the elimination of known hazards and immediate danger to life and health (IDLH). According to the Bureau of Labor Statistics (BLS), the
The construction industry has the highest occurrence of fatal occupational injuries in goods-producing private industries. Ergonomic hazards are not an immediate danger to life and health conditions and currently not required by law to be abated.

6. Physical wear on the worker is culturally accepted as part of the job.

7. Construction never takes place in the same environment. Each site is different, each job is different, and the weather changes continuously. Traditional ergonomic principles are hard to apply with so much variation.

8. As a stereotype, construction workers are usually focused on completing the task in the fastest manner possible. Ergonomics is something else they would have to do. Safety used to be this way, and it has taken more than 20 years to become ingrained into the construction lexicon.

Ergonomics is not known or preached as a focus in construction; however, ergonomics has somewhat been embedded in construction without necessarily calling it ergonomics. Workstation design and workflow have changed, work set-up and staging have changed, and tools and handling aides have also evolved in time, all with ergonomic benefits included in the new designs. However, what has not changed much is behavior, workforce fitness, and risk factor reduction.

**Why Ergonomics for Walsh**

In early 2012, we were in the process of trending our 2011 workplace injuries. During this process, we found that 40 percent of our recordable injuries fell into two categories; power tool use and musculoskeletal disorders (MSDs). A decision was made to focus on these two categories as an opportunity for improvement. A stretching program already existed and, although most folks thought this was helpful, it was only one piece of the puzzle. We sought to learn more about why we were having MSD injuries and what we could do to help.

Furthermore, we had support from our top management. Dan Lucas, our Business Group Leader, is in charge of the entire region. We recently asked Dan a few questions about our ergonomic program, and here are his thoughts on why he supports our initiative: “If we had one silver bullet to make an impact and to keep people safe, what would it be? That needs to be soft tissue injuries. They are also some of the most severe and long-lasting injuries that we have. They (our employees) are potentially impacted for the rest of their lives.”

Our first attempt at “ergonomics” was to hire an athletic trainer. While our trainer had a good understanding of body mechanics and why our team members were getting hurt, we quickly determined that we needed to back up a few steps. We were at step 5 or 6, and had no idea what steps 1 through 4 were.

On our second attempt, we were lucky enough to find Heather Crawford, CPE. Heather has a strong ergonomic consulting background, combined with a professional presence that brings credibility to the subject of ergonomics. From the onset, it was important to have the “voice of ergonomics” be as credible as possible. Heather has managed to strike a balance of keeping her message smart, simple, and practical. Even the most hardened craftsman will implement a soft skill like ergonomics if you can show that it makes sense to them, it’s easy, and that it works. Getting craft level buy-in has been the biggest achievement of our program to date.
Where Do We Start?

As with any program, it’s important to have an idea of what you want it to look like in six months, 12 months, and two years. We started with objectives for each month for the first six months, and the goal of each activity. From there, we set up larger intervals of six months, one year and the second year, each with activities and goals. Some activities were as simple as writing an ergonomic perception survey; others were much more involved, such as training more than 800 regional employees in multiple ergonomics awareness class. We’re proud to say, for the most part, we stuck with the schedule and hit all but a couple of goals in the past 16 months.

The difficult part of this process was to set up realistic measures of success for the program. How do you measure success over the first year of a program like this? Our program has been completely customized by us, and does not reflect a traditional safety program nor a traditional ergo program. We fully expected our number of MSD injuries to initially increase simply because we were talking more about them. Given this expectation, we could not use injury reduction alone as a measure of success. We settled on the following metrics:

- Percentage of employees trained in ergonomic awareness
- Comparing the results of our initial perception survey versus one year later
- Incorporation of ergonomics into Walsh’s behavior observation program, Review Employee’s Actions and Performance (REAP)
- Number of field improvements implemented

Walsh’s Ergonomic Program

As previously stated, it is difficult to deploy a ‘traditional program approach’ to ergonomics in the construction industry. Typical ergonomic programs will involve risk assessments and, to date, we have not used a quantitative nor qualitative risk assessment. At the onset of our program, Steve Thomas and Heather Crawford scripted an “Ergonomic Program Plan” for the first year of the program.

The first month’s goals included: reviewing injury history, getting involved with the new office move, and developing and deploying an ergonomic perception survey. The following months’ goals included: deploying an Ergonomics Perception Survey, conducting ergonomic training classes, updating our Stretch & Flex routine, documenting and sharing innovative solutions through “Cool Tools,” and many more objectives. These goals are all outlined in the following sections.

Ergonomics Perception Survey

Before we started to reach out to employees about our new intent to focus on ergonomics, we wanted to ensure we had a comprehensive understanding of their knowledge, or lack, of ergonomics. We asked every employee to complete an “Ergonomic Perception Survey.” This needed to be a one-page document, as time is of the essence in construction, and it needed to be short and sweet. The survey consisted of 14 questions: seven questions required a yes/no response, five were multiple choice, and two asked for written responses.
Our response from the survey was overall very high, as approximately 72 percent of the Walsh employees in the region completed the survey; a total of 542 people. The results of the survey were analyzed and the most notable results were:

- 40 percent of employees know what ergonomics is
- 30 percent of the workforce does not feel free to report injuries
- 31 percent of the workforce reports ergonomic injuries too late
- 56 percent of employees appear exhausted at the end of the day
- 23 percent of employees stated lifting was the most difficult task
- 51 percent of employees do not know of Walsh’s lifting guideline

The results of the survey were compiled for the region in its entirety, and this allowed us to use that as our standard. Each individual jobsite was compared to the regional average and also each region was also compared to this standard (regions were broken into: Pennsylvania, Connecticut, and Boston). Ultimately, the survey ended up somewhat serving as an employee morale survey and showed us which jobsites ranked high and which ones ranked lower. The intent of this survey was also to give us a base point to compare to after a year of concentrated effort on ergonomics.

After a year of a focused approach on ergonomics, we sent out the survey again in early 2014. We are currently awaiting responses to be analyzed and compared to the results from late 2012. We are very much looking forward to seeing the results.

**Ergonomics 101: Ergonomics Training Classes**

One of the main focus’s for the initial year of the program was to educate our employees on ergonomics. Through our survey, we learned that 60 percent of our work force did not know what ergonomics is. This is not alarming as ergonomics is rarely a focus in construction, as previously stated.

The ergonomics training class needed to be short as there are many other training initiatives concurrently being completed. We determined the class should be one hour in length and we wanted to keep our message simple. Dan Lucas also noted that for success of the program we needed to, “Be able to spend time and train our workforce on what it means to move within our industry - not using potentially any other equipment or any other devices – but JUST be educated on how to move properly. That comes down to just training people and giving them the opportunity to be educated on how to protect their body on a day to day basis.”

Our goal for the year 2013 was to train every employee in the region. Because of the nature of construction, the amount of employees is continuously fluctuating. The northeast region for heavy civil at Walsh typically has between 500-1000 employees at any given time. Because of the nature of this class and the nature of construction employees, it was determined that the ideal class size was 10-15 people. Anything beyond 15 and some participants could get lost in the back of the class, or the class could get out of hand.

Another challenge of planning the training class was that there was one instructor on a part-time schedule (Heather), and we needed to reach a fairly large geographic location. We had projects in:
In this training class, we made our message simple. We also made the slides very simple and mostly visual. Many construction photos were used, but they were all photographs taken from only our jobsites and by the instructor. For example, when discussing and defining what ergonomics truly is, we used these two pictures. Before we gave our definition of ergonomics, we asked our employees to comment on these pictures.

Also, our message was to educate our employees that ergonomics is personal and is also, many times, a personal choice. Specifically, we want them to focus on their posture while doing their work. As in the photos above, sometimes it is a choice to choose the correct working posture. The employee on the right took the time to set the workstation up so he could be in an upright position while working.
With our training classes, we also wanted to make them more personable and more memorable. Part of our message is that when you injure your back at work, it is much more difficult to pick up your grandchildren or children at home. We provided all participants with a hand-out that summarizes the training class, as well as touches on some personal notes. It encourages employees to find ergonomic issues and fix them, instead of just continuing to do what they do. We also provided all participants with a hard-hat sticker, something to take with them to remind them about ergonomics.

The hard hat sticker was developed based off the logo we created for ergonomics, and also based off feedback we received on our evaluations forms. Some employees gave us written feedback on evaluations that the most positive aspect of the training class was “That Walsh Cares.” So, our slogan then became:

\[\text{WALSH}\]
\[\text{Cares}\]

In a matter of 12 months, 817 people were trained in 63 classes. Evaluations were collected at the end of every training class and scores continuously improved throughout the 12 months. The biggest opportunity for improvement of our training from the feedback was that our training class was too short.
One of the critical components to the success of the training class and the program as a whole, is that the training class was merely educational. The main purpose of it is to help our employees save their backs. Some employees have also questioned us and assumed we were getting a big insurance break by offering this class. On the contrary, our program has absolutely no relation to our insurance rates and this region has voluntarily decided to focus on ergonomics. The region decided to focus on ergonomics because they care and because people are getting injured. Injury costs for Musculoskeletal Disorders (herein referred to as MSDs) were not calculated until after the ergonomist was hired and after the program commenced. One of the biggest sources of success of this program is that there is not any extra work required on behalf of any of the attendees of the training class. Our training class truly is purely educational. As of today, there are no requirements from any Walsh employee to contribute to the ergonomics program—everything is voluntary.

**Stretch & Flex: Updating our routine**

It came to our attention, while preaching ergonomics throughout the region, that our stretching routine is inconsistently executed and not very effective. We received a bit of verbal feedback and a few emails about desires for it to be changed, so we did just that.

We contemplated scrapping our Stretch & Flex program altogether because statistically stretching programs have not been proven to reduce injuries. However, we wanted to gather our employee’s thoughts on our current program before scrapping it, so we started by sending out a survey. Because of the positive results and response rate from the Ergonomic Perception Survey, we structured the Stretch & Flex Survey in a very similar fashion.

We are thankful we did this survey before seriously considering scrapping the program because 87 percent of employees want to continue doing the stretching program and 85 percent of employees feel better after they stretch. We mainly saw positive feedback on the program and received great ideas on how to improve the program. We took those ideas into consideration and incorporated the changes to the program.

Most employees wanted some new stretches, a warm-up included, and a longer stretch session—some jobsites stretch for about three minutes—all of which were included in the new routine. In the past, some jobsites had actually been following different stretching routines from different sources, as well as some non-credible sources. A new routine was created and trialed with a few jobsites throughout the region. Feedback was collected and the routine was changed accordingly. The final Stretch & Flex version was created and booklets were given to each foreman. Additionally, a short four minute video was created to share with new hires to orientate them to the new program.

“Cool Tools”

As ergonomics has gained a foothold in this organization, employees have come forward with ideas they’ve implemented or seen in the field. The challenge we face is being able to replicate these ideas and also being able to share them. When, eight months from now, a laborer in Boston is facing the same challenge as a laborer in Pittsburgh did, we don’t want to make the same mistakes or reinvent the wheel.
In construction, every day is a new problem with new solutions yet to be discovered. And, what works for one man or one crew may not work for another. So, as solutions are shared, typically during the training sessions, we have been sharing them with the rest of the region. We are also documenting them on the Walsh server so any Walsh employee throughout the nation, or even internationally, can view them.

The following is an example of some great, already existing solutions to ergonomic issues. Two of our carpenters had been experiencing some form of elbow tendonitis. Both of these carpenters had been seeing a doctor and physical therapists to help remedy the situation. However, after years of seeing the doctors and physical therapists the pain still existed. Both of these carpenters resolved to, on their own, purchase different hammers they had seen or heard about. Each carpenter bought a different hammer but both hammers were lighter weight. One hammer was skeletonized and titanium and the other hammer was fiberglass and curved. After getting used to using very different hammers, the carpenter’s problem and pain had vanished. Sharing these cases with the rest of our employees is critical to spreading the word of the benefits of “Cool Tools” and good ergonomics.

Some products have been available off the shelf, while others have been homemade. One of the most beneficial tools we have seen that has been homemade is a tool to hang whalers (whalers are installed to support bridge decks). A foreman made an extended handle to hold two 2x12s in place while remaining somewhat upright, instead of bending or contorting to reach below the bridge deck (or below the standing surface). He made this to help employees save their backs; however, one of the most positive benefits, unbeknown to the foreman, was that they ended up installing more whalers in a day while using the tool versus when not using the tool.

As they have demonstrated, construction workers are very creative and do an excellent job at inventing a solution when faced with a problem. In February of 2014, about a year and a half after program inception, we launched a “Cool Tools Competition” to collect more examples of ingenuity in the field. The competition has brought us a myriad of innovative solutions to recognize, reward, and share with the rest of the company.

Additional Methods and Best Practices
We have attempted to incorporate ergonomics into every facet available to us. Implementing ergonomics into various facets of a construction company is not easy, as sometimes these facets are difficult to come by.

Lifting Guidelines
Safety managers present a safety topic every week to the entire jobsite at the “Toolbox Talk.” One of the 49 safety topics is safe lifting. Lifting is one of the most commonly noted most difficult tasks in construction—and lifting is not going anywhere. Lifting will forever be a part of the construction worker’s daily tasks, thus we must do all that we can to make it the best situation possible.

Our safety topic documents on Lifting Guidelines were out of date and rather difficult to read or understand. We have updated the document to be mainly visual and include photographs from our own jobsite. We also wanted to document and share the 50-pound lifting limit. Our documents have been updated to reflect the following:
Root Cause Analysis
Ergonomic issues constantly arise in the construction environment and the key to the ability to solve the true problem is a comprehensive root cause analysis. We have discovered that this is an area where we can greatly improve upon.

For instance, an injury occurred about two years ago where we were building a bridge. The employee pulled a tag release line from a clamp that was holding an H-pile and injured his shoulder. The team at this project decided that the only way to prevent a similar occurrence would be to place more emphasis on the stretching routine.

However, this particular situation was depicted to all participants in our ergonomic training class. Before showing the solution defined by the project team, the participants were asked to evaluate the task and come up with their own solutions. They were asked to identify ergonomic risk factors as well as the root cause of the problem. Since we had a mocked photo of the incident, every class determined that the employee was reaching to the tag line, so the root cause was that the tag line was too short. Every class immediately decided they needed a longer tag line. But that was not the only solution. Each class brainstormed between 5-8 different solutions for this particular situation. They came up with solutions that were actual physical changes to the working environment. They figured out solutions that addressed the root cause of the injury, instead of telling the employee to stretch more.

Some time was spent discussing root cause analysis in our training classes; however, this is an area where we should spend more time on in the future.

Walsh’s Lifting Limit
As a corporation, Walsh has a lifting limit defined, however not many people know of this guideline nor is it technically documented. Also, numerous Walsh employees have different stories of how and where the lifting guideline was derived. At times, our lifting limit resembles an urban legend.
Most companies have a not-to-exceed lifting limit in place. Our limit is different. Our “1-person lifting limit” is set at 50 pounds and is communicated as a recommendation and a guideline for lifting. It is not an absolute, not to exceed value, as construction workers may often lift more than 50 pounds.

Most construction workers scoff at the mention of a lifting limit of 50 pounds. Most construction workers are also very easily capable of lifting much more than 50 pounds. For instance, workers are routinely lifting concrete bags that weigh 94 pounds. It’s more difficult to get someone to help lift a bag rather than just lifting it by yourself. So, when sharing our limit we are conveying the fact that 50 pounds is a recommendation and a guideline – not an absolute rule or law. Our workers will not get written up for lifting more than 50 pounds, they should be offered a helping hand instead. Additionally sharing that this limit is purely in place to help them save their backs has helped the message sink in to our workforce, and will hopefully make them think twice next time they might twist with their back while lifting a concrete bag.

**Opportunities for Growth of the Program**

Our Ergonomics Program is in its infancy and has had good success thus far. However, we must not lose the momentum we have gained in these short one and a half years. There are a few avenues we have yet to really pursue when it comes to creating a formal program (a documented standard) and still more avenues for proactively addressing ergonomics.

**Office Ergonomics**

Reactively, and slowly but steadily, we have ventured into office ergonomics. Prior to inception of the program, the office had no known ergonomic issues and definitely not any ergonomic injuries. Thankfully, we have yet to have an MSD in the office within our region, however, once an ergonomist was on staff, small ergonomic issues have risen to our attention.

A few people have reported back pain and in each case, each person’s work area was individually assessed for ergonomic risk factors. Recommendations were made and in a few occasions, solutions were implemented. The Pittsburgh regional office recently acquired one sit/stand workstation for an individual with severe back pain and we are anticipating inquiries from curious onlookers. We are hoping this will have a trickling affect and will permeate other inquisitive minds or bring forward other existing sources of discomfort to help us proactively remediate any potential for injury.

**Potential Partnership with Auburn University**

Auburn University has a progressive and innovative program called Studio Build. In this program, multi-disciplinary students work together with manufacturers and craft workers to solve industry issues through product design. These industry issues are either focused on productivity or safety and ergonomics is typically and naturally considered in the design of the new product.

Partnering with this program would allow Walsh to be progressively and proactively involved with ergonomics – at the stage before products are introduced to the workforce. Walsh has been in communication with Auburn University and we have visited their facilities to meet the students and staff who have created some great, innovative solutions. However, at this point in time there has not been an official partnership. There is a potential for a great partnership in the future especially considering the geographic location of Walsh’s southeastern headquarters. Archer Western is located in Atlanta, Georgia, which is in very close proximity to Auburn.
University. We look forward to continuing to keeping in touch with the program and potentially partnering in the future.

**The Business Impact**

Since our program has only been in place for approximately one and a half years, our results are truly too green to provide specific and measurable impacts on our business. However, as Dan Lucas stated, “For that first 12 months, and possibly the first 16 months, it was an important task not only to make the ergonomic program as effective as possible but it was also important to somehow track the accountability of it. Is this worth the investment and time?” With the first 16 months of the program behind us, we have seen some tangible and non-tangible results. In this section we will share our general thoughts on our business impact as well as what we should expect and what other industries expect, and also some specifics of what affect this has had on our business.

**Return on Investment**

The focus on our return on investment really is multi-layered and includes many of the process elements you would think of when it comes to implementing any worthwhile Ergonomics Program including significant impact on:

- Production,
- Costs of Injuries and Risk,
- Regulatory Compliance, and
- Other Health and Safety Benefits.

**Production**

Ergonomics has an enhanced focus on work layout and overall project logistics and is naturally going to impact our overall production rates on projects. We believe it is a potential goldmine with our workforce and easily translatable and also transitional across all projects as well as outside of our own company. A lot has changed at Walsh and other contractor’s ergonomic environment on most construction sites without knowingly calling it ergonomics. More focus on “work station design” or workflow has absolutely changed over time with new and improved tools fit to the worker, more functional handling aids, and better work set-up and staging.

**Cost of Injuries and Risk**

According to the National Occupational Research Agenda (2001), conservative estimates of the economic burden imposed by MSDs in the United States (as measured by compensation costs, lost wages, and lost productivity) are between $45 and $54 billion annually. Some experts estimate an even higher economic burden reaching up to $210 billion for low back pain alone (Jones and Kumar, 2001).

Specifically, for our Heavy Civil North East group, we have tracked MSD injuries for the year 2012 and 2013 and we have, surprisingly, seen a 27% reduction in MSDs among our employees. As previously stated, we anticipated an increase in MSD injury rate but have been very fortunate to see a decrease. Some may call this a “fluke,” as this is only one year’s worth of data—but we can also compare it to our counterparts within Walsh who do not have an Ergonomics Program in place. Their rates have remained the same while ours have decreased.
This proves very valuable to us, as we can begin to calculate our return on investment for this program.

**Regulatory Compliance**

There are no federal standards for ergonomics. However, some organizations can and will be cited for poor ergonomics. Typically, ergonomics falls under the OSHA General Duty Clause, "every employer must provide a safe working environment for their employees.”

California is the only state to have ergonomics standard, where if more than one employee, performing identical tasks, has been diagnosed with a repetitive motion injury, the employer must have completed an evaluation and have corrective actions to address the injury and work area.

Additionally, there is a voluntary standard for ergonomics in construction. Despite considerable opposition from industry groups, in 2008 ANSI adopted a voluntary consensus standard for musculoskeletal injuries in construction, which promotes ergonomic solutions. The Voluntary Standard, ANSI A10.40 Reduction in Musculoskeletal Problems in Construction and Demolition, has been very rarely used in our program since we have highly customized our program, albeit the standard has been a helpful reference.

**Other Benefits**

We choose to do this program for our employees and our business; it makes sense and adds value to both. We are willing to do something for our people above and beyond, and many of our employees have noted this. We have overheard many of them commenting that “other companies I’ve worked for have never done something like this.”

1. **Employee benefits:** In a recent survey (Schneider, LHSFNA), 40 percent of construction workers said "working hurt" is a major problem. Working hurt reduces productivity, but continuing to work hurt can result in disabling injuries that end a career. Many laborers retire by age 55 because they just can't do the work anymore. We want our employees to be comfortable, which means finding ways to make work easier AND more productive. Smarter, not harder, and with fewer injuries. Employee morale has also been improved since inception of this program. As everyone knows, morale is a difficult area to show tangible results – but we do know we have seen improvements in our morale overall.

2. **Business benefits:** In addition to the intangible employee benefits, with an ergonomic program you get a happier and more productive workforce, higher retention of good workers, quality and efficiencies built into work design, reduction in cost of risk, lower incident rates and WC premiums, overall wellness and absenteeism reductions, lower healthcare costs.

**Comparing Us to Others**

There are not a lot of published success stories of contractors with comprehensive ergonomic programs. Many companies have taken the initial steps, just as we have, into the “Stretch & Flex” program but not many have taken the next steps with sound root cause analysis, formal training, or any type of risk assessment. Actually, you will find a much more advanced ergonomic culture in general abroad. The European Union has had some success with their MSD Directives and hence more success stories both with contractors and designers/suppliers of tools, handling aids, and other engineering solutions.
Next Steps and Challenges
Our next steps do include using a formal risk assessment, although we are not quite sure when we will implement. We want to work on targeting individual employees to determine what specific job tasks each employee performs, and conduct an analysis of the work being performed to determine the frequency, likelihood and severity of the risks they are exposed to everyday from both a qualitative and quantitative standpoint. We expect this to move us from good to great by involving our employees in the risk assessment process, which will include risk reduction and integrated solutions. We will use outcome, process and progress measures to measure our effectiveness, achievements as well as setbacks along the way.

Bibliography


California Code of Regulations. Title 8, Section 5110. Repetitive Motion Injuries. Register 2014, No. 5. 2014.


