ZERO INJURY:

A CULTURAL IMPERATIVE FOR THE CONSTRUCTION INDUSTRY

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IF THERE IS A SILVER LINING IN THE PROTRACTED DOWNTURN AND DELAYED RECOVERY IN THE CONSTRUCTION ECONOMY, IT IS THAT "FATAL CONSTRUCTION INJURIES ARE DOWN NEARLY 42% SINCE 2006" ACCORDING TO THE BLS NATIONAL CENSUS OF FATAL OCCUPATIONAL INJURIES IN 2011.

That same report observed that "fatal work injuries in the private construction sector declined to 721 in 2011 from 774 in 2010, a decline of 7% and the fifth consecutive year of lower fatality counts."

However, as the general economy stabilizes and construction spending and project volumes increase, it will not be long before hiring pressures mount throughout the industry.

With an increase in hiring comes an opportunity to institute increased emphasis on safety through employee selection standards, substance abuse testing, new employee orientation and training processes, as well as job safety analyses and daily "huddles" to address project safety requirements.

There is no better time than now for construction company owners and CFMs to focus on systematic injury prevention by adopting a zero injury vision and strategy and begin a transformation into a zero injury culture.

Reality Check: Stop Rationalizing Construction Injuries & Fatalities as a Cost of Doing Business

Stop for a moment and reflect on the hard fact that many construction workers are injured, disabled, and killed at work each year. It is widely recognized (or rationalized) that construction is a hazardous industry, accidents happen, and jobsite conditions are constantly changing and difficult to control.

The reality is that the overwhelming majority of injuries and fatalities are preventable. A common trait we've observed among companies that have adopted a zero injury culture is an underlying philosophy and belief that all injuries and fatalities can be eliminated.

What is required to make this philosophy a reality? Leadership resolve to change the prevailing attitude that rationalizes fatalities and injuries as an unfortunate aspect of the construction industry and a cost of doing business and a culture shift that changes the attitudes, beliefs, and behaviors of all industry stakeholders.

This shift to a zero injury culture instills a true belief that injuries and fatalities are not acceptable, should not be condoned, and can not only be reduced, but actually prevented. This culture shift is necessary at the project, company, and industry levels, as well as in the thoughts and actions of each construction employee.

Zero Injury Culture Is for All Companies

Culture shapes the performance expectations of such key workplace attitudes as the importance of punctuality, wearing proper attire, and how hard to work (or not to work). It directly influences safety attitudes and behaviors, including whether employees wear protective equipment, ignore training instructions, and/or take safety shortcuts to finish work faster.

Therefore, culture determines if a company or work crew will act with a safety-conscious and risk-averse set of values or accept "at-risk" attitudes and behaviors as the prevailing norm.

With the emphasis on zero injury or zero incident culture by large contractors, many small- and medium-sized contractors are wondering if this is a suitable strategy for them as well. We believe all companies can benefit from adopting a zero injury vision and strategy.

The success of a company's drive to attain a zero injury culture hinges on a company's owners and senior leaders who must instill, reinforce, and sustain the core building blocks of a zero injury safety culture shown in Exhibit 1 below.

How to Institute a Zero Injury Culture

Companies that have adopted a zero injury culture generally have instituted the measurement of leading indicators in addition to traditional lagging indicators (which are discussed in "Risk Performance Metrics" by Calvin E. Beyer in the September/October 2007 issue). Leading indicators focus on the prevention-based activities that drive improved safety expectations and performance outcomes.

Exhibit 1: Zero Injury Safety Culture Building Blocks

	Representative Examples
Attitudes	Zero injury is attainable on every shift and every project Zero injury culture needs to permeate all company activities and not be viewed as a separate process
Beliefs	All levels of the organization believe that zero injury is achievable – from company executives to all craft/trade employees All employees accept personal responsibility and accountability for zero injury
Values	The company values the health and safety of all employees The company is committed to employees going home safe at the end of every work day
Assumptions	Employees are not taking unnecessary risk New employees accept safe work practices as the expectation
Norms	Employee behavior on projects rejects shortcuts and recognizes that unnecessary risk-taking is not acceptable Zero injury is ingrained in the way the company builds every construction project – regardless of size, location, company division, manager/supervisor, and/or schedule

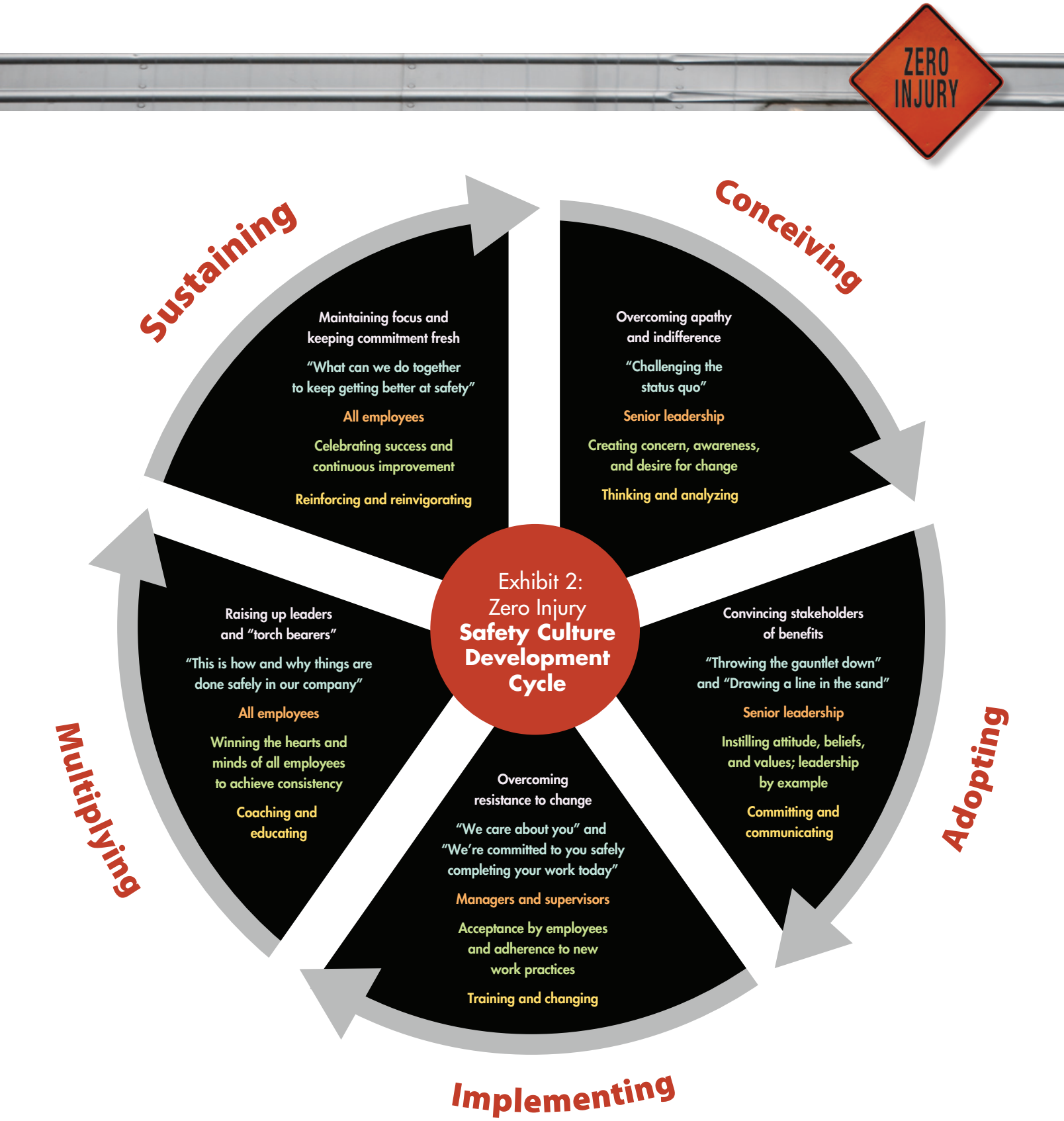
ZERO INJURY
Exhibit 2:
Zero Injury
Safety Culture Development Cycle
Conceiving
Overcoming apathy and indifference
"Challenging the status quo"
Senior leadership
Creating concern, awareness, and desire for change
Thinking and analyzing
Adopting
Convincing stakeholders of benefits
"Throwing the gauntlet down" and "Drawing a line in the sand"
Senior leadership
Instilling attitude, beliefs, and values; leadership by example
Committing and communicating
Implementing
Overcoming resistance to change
"We care about you" and "We're committed to you safely completing your work today"
Managers and supervisors
Acceptance by employees and adherence to new work practices
Training and changing
Multiplying
Raising up leaders and "torch bearers"
"This is how and why things are done safely in our company"
All employees
Winning the hearts and minds of all employees to achieve consistency
Coaching and educating
Sustaining
Maintaining focus and keeping commitment fresh
"What can we do together to keep getting better at safety"
All employees
Celebrating success and continuous improvement
Reinforcing and reinvigorating
Key Challenge
Snapshot Quote
Core Responsibility
Accomplishments
Process Outcome

Exhibit 3: Safety Culture **Health Check**

The following 10 questions are designed to provide a quick assessment of your company's current safety culture. Even though this health check cannot provide insight as deep as a comprehensive, systematic safety perception survey, it is a useful tool for gauging the need to expand safety awareness and accountability.

1. Does your company's senior management team operationalize safety commitment and show demonstrable involvement in managing the process by addressing safety as a core strategic discipline that positively impacts the execution of company and project performance?
2. Do your company's supervisors and employees fundamentally believe that all accidents and injuries are preventable, or do they believe that accidents and injuries are part of working in the hazardous construction industry?
3. Is your company known for having a robust safety program with rigorous attention to safety, or is safety known to take a backseat to production pressures?
4. Does your company's prevailing attitude toward safety regard it as a necessary evil that decreases productivity or as a vital process that positively impacts productivity and profitability by maintaining a healthy workforce?
5. Is safety performance viewed as the responsibility of a corporate safety officer, or is adhering to safe work practices the responsibility of every employee?
6. Does your company have a culture that condones or eliminates safety shortcuts?
7. Does your company engage all employees in safety processes, including conducting safety observations to identify and correct unsafe conditions and "at-risk" behaviors?
8. What is your company's reputation for safety among peer group companies and among the recognized industry leaders?
9. Is safety an important aspect of your company's brand image and reputation?
10. Is your senior management team willing to go "all-in" for the safety and welfare of its employees by making it a core value of the company?

Exhibit 2 on the previous page outlines a life cycle process for the development of a zero injury safety culture. We have high-lighted five distinct phases and delineated key steps and milestones for each phase. The five-phase model is presented to provide a useful framework for monitoring the progress of the evolving process.

For simplicity, Exhibit 2 summarizes key challenges, major milestones, and process outcomes in each of the five phases of the zero injury culture development life cycle.

Similar to safety culture development, rarely is a one-size-fits-all approach appropriate for any organizational process or practice. Company culture is unique and will grow and change in its own way.

Building an organizational safety culture can be a slow and messy process, and it does not necessarily follow a linear progression. Sometimes the adage of "one step backward to go two steps forward" is necessary advice.

A model of organizational transformation that we found relevant and realistic to instituting zero injury culture is "Journey of Transformation: The CFO's Perspective" (by Renee Beaulieu, Skip Perley, Dr. Perry Daneshgari, and Heather Moore in the May/June 2012 issue), which describes the Strategic Breakthrough Process Improvement.

Many of the companies adopting a zero incident or zero injury culture often describe their process of doing so as a journey.

Safety Culture Development Challenges

The 10-question Safety Culture Health Check in Exhibit 3 can provide your company's leadership with an assessment of their personal and organizational readiness for instituting a zero injury culture.

It is crucial that the zero injury culture process be well conceived with thoughtful consideration of how to communicate the company's commitment, secure employee engagement, and implement functional support structures to reinforce and sustain the process.

It is important to recognize that employees will intuitively know if the company leadership sincerely wants to adopt a zero injury culture. Employee skepticism will run high if the company has a history of initiating and quickly abandoning "fad of the month" safety programs.

A final "gut-check" question is necessary to determine your company's readiness and resolve for adopting a zero injury culture: Is your company ready and willing to commit to adopting, instituting, and sustaining a zero injury culture?

In honestly evaluating this question and its implications, it is natural to consider the challenges in doing so and identify the obstacles to overcome for your company to be successful.

Benefits & Outcomes

Once implemented, the benefits of a zero injury safety culture will be realized through reduced claim severity and frequency, increased productivity, and improved profitability. Once a zero injury safety culture is achieved, your company will:

- Become an employer of choice, reduce voluntary attrition, and improve morale among existing employees
- Increase productivity by decreasing time spent investigating employee injuries and reducing idle equipment, thereby increasing potential for improved margins
- Decrease direct and indirect costs associated with employee injuries, thereby reducing your company's total cost of risk
- Demonstrate improvement in project owners' prequalification metrics (e.g., total recordable cases (TRC); days away from work, job restriction, or transfer (DART); Workers' Compensation Experience Modification Rate (EMR), etc.), thereby remaining on eligible bidder lists and increasing opportunities to bid desirable projects
- Align zero injury culture with other strategic zero-based risk management objectives: zero defects, zero crashes, zero equipment breakdowns, zero defaults, zero IT downtime, and zero disruptions

  (For more information, read "Zero Disruptions: Preparing for Unexpected Business Interruptions & Protecting Your Assets" by Calvin E. Beyer and Brian J. Cooney in the May/June 2011 issue.)
- Attain respect among peer competitors and establish a positive reputation in the industry

Exhibit 4: Management Safety Culture Assessment

	Assessment Category	Assessment Factors
1.	Organizational Leaders Operationalize Commitment	Demonstrable senior leadership participation and involvement Resource allocation Core processes and results measured Accountability system for safety at all levels of the organization
2.	Identify Safety and Reliability as Goals	Safety as a goal is consistently and clearly articulated Multiple and independent channels of communication Decentralized decision-making authority
3.	High Levels of Redundancy in Personnel and Technical Safety Measures	Continuous operations and training Job hazard analyses are owned, continuously reviewed, and updated
4.	Organization Strives for a "High Reliability Culture"	Presents optimism toward a desired future state Consistent communications Adaptability to change
5.	Sophisticated Forms of Trial and Error Organizational Learning	Capacity to learn and act Accident investigations are blame-free and pursue systemic improvements Hazard analysis occurs before accidents

Management Safety Culture Assessment

Various survey instruments have been developed to measure perceptions of safety management culture. The Management of Safety Culture Assessment is based on the Determinants of Safety Culture Model, which assesses the measurable capacity and performance ability of companies to minimize accidents, injuries, and related costs.

According to Dr. Christopher Garrabrant, the Management Safety Culture Assessment and Determinants of Safety Culture model are founded on Charles Perrow's 1994 discussion of Normal Accident Theory and High Reliability Theory, both of which correlate to reducing losses.

Garrabrant asserts this Management Safety Culture Assessment identifies and measures 15 factors within five broad categories that contribute to the success of a company's safety culture, as shown in Exhibit 4 on the previous page.

A company demonstrates the necessary values within its culture to promote the health and wellbeing of its employees. The culture demonstrates behaviors that can be expected to result in fewer workplace accidents and achieve a more rapid return to work should an accident occur. The assessment is intended to validate a company's ability to exceed industry expectations of safety performance.

Importance of a Zero Injury Mind Shift in the Construction Industry

We recognize that for a true zero injury culture to occur, the mindset of zero injury needs to reach beyond the individual company culture and become the norm for the construction industry as a whole, since many contractors use the same subcontractors, vendors, and workforce. Therefore, until the industry – including all owners, contractors, and employees – takes a unified stance against unsafe behaviors and acts, each individual company will obtain limited success as a zero injury culture.

We envision a construction industry with the shared culture where workers have the same positive experience at every project where they are asked to put in an honest day's work without taking any unnecessary risk and where they safely complete their work each day.

In order to do that, we are encouraged to see GCs and subcontractors band together with insurers to start working as an industry to change the norm for all workers to complete each work day safely.

Please take a moment to think about whether you are willing to do what is necessary to help make zero incidents, injuries, and fatalities a reality in your company ***and*** the construction industry.

Challenge the conventional thinking about the construction industry being hazardous and help make the vision of a zero injury culture within this industry a reality.

We appeal to every stakeholder of the construction industry to join the cause of making zero injuries a reality. There really is no higher calling for the construction industry – the time is now for zero injuries to be the expectation, the norm, and reality. ■

WEB RESOURCES

1. **BLS Economic News Release: Census of Fatal Occupational Injuries Summary, 2011:** *www.bls.gov/news.release/cfoi.nr0.htm*
2. **Zero Injury Techniques, University of Texas at Austin, Construction Industry Institute:** *www.construction-institute.org*
3. **Safety Plus: Making Zero Accidents a Reality. University of Texas at Austin, Construction Industry Institute:** *www.construction-institute.org*

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For the past 11 years, Eric has worked to make a zero injury culture a reality. Eric has participated in many construction industry roundtables and committees to learn from and provide input to improve the industry's safety culture and practices.

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A Brief History of **Zero Injury Culture in Construction**

The concept of zero injury in construction has existed at least since 1993 with the publication of the Construction Industry Institute's (CII) ***Zero Injury Techniques***. The 1993 study highlighted 170 techniques that construction companies used for injury prevention. The CII's follow-up study in 2003, ***Safety Plus: Making Zero Accidents a Reality***, further popularized the term and increased awareness of the benefits of a zero injury culture.

The 2003 study quantified a significant demonstrable improvement in safety performance of companies adopting nine high-impact, zero injury techniques:

1. Demonstrated management commitment
2. Staffing for safety
3. Planning (pre-project and pre-task)
4. Safety education: orientation and specialized training
5. Worker involvement
6. Evaluation and recognition/reward
7. Subcontractor management
8. Accident/incident investigations
9. Drug and alcohol testing

Since the two CII studies, a growing number of construction companies, many of which have more than $250 million in annual revenues, have adopted the vision of creating a zero injury culture. In the past couple of years, a cadre of such companies (known as The Incident & Injury Free CEO Forum) emerged to provide leadership by example on the benefits of zero injury culture.

Members of this group include American Infrastructure; Baker Concrete Construction; BMW Constructors, Inc.; Cal Dive International; Gilbane Company; Great Lakes Dredge & Dock; Hunter Roberts Construction Group; Jacobs; JMJ Associates; Lend Lease; Limbach Facility Services, LLC; Manson Construction Co.; Nicholson Construction Company; Skanska; Terracon; and Weeks Marine.

These companies are collaborating to expand awareness of zero injury techniques and have been engaging with representatives from major construction insurance carriers and brokers to foster greater adoption of zero injury culture throughout the construction industry.

Zero Incident

Many large companies have adopted programs with a more stringent focus of attaining zero incidents instead of merely zero accidents. The rationale is that incidents are "near hits" that could have resulted in injuries or fatalities and near hits are early warning signals of an underlying hazard that warrants attention and correction.

One of these companies distributed ***Safety 24/7: Building an Incident-Free Culture*** to all its subcontractors. This book is recommended for any owner or strategic leader seriously interested in instituting a safety cultural change.