
Tennessee Workers: Dying for a Job

A report on worker fatalities in Tennessee,
2012 & 2013

In honor of Workers Memorial Day, April 2014

A project of
Knox Area Workers Memorial Day Committee
Knoxville, Tennessee



Dedication

This report is dedicated to all the working men and women in Tennessee—both known and unknown—who died in 2012 and 2013 on the job or from illness or injury contracted on the job.

We remember here again the four men who died building Tennessee bridges in a short sixteen-month span from November 2010 to March 2012. They were: René Mendez, John Womac, Solín Estrada-Jimenez, and Abimael Contreras. These men's deaths—each on a Tennessee Department of Transportation project that involved Britton Bridge LLC or its close affiliate Mountain States Contractors—gave new local visibility to issues of workplace safety and eventually led to formation of the Knox Area Workers Memorial Day Committee.

This year we are also mindful of a fifth man whose name was unknown to us last year. He was Mario Perez, and he died on another TDOT project while employed by Mountain States Contractors. He was killed in 2005 in a Nashville trench collapse that was entirely preventable and should never have happened.

Our hope is that this report, and the larger efforts for workplace health and safety of which it is a part, will serve as a fitting tribute and memorial for all workers who died in this period and that it will offer some comfort to those they have left behind.

Table of Contents

Introduction	1
Executive Summary	3
In Memoriam: 2012 and 2013	4
Tennessee Worker Deaths: An Overview	20
1. Motor vehicle accidents and workers struck by vehicles	21
2. Falls	22
3. Encounters with machinery	23
4. Other struck-by incidents and collapses	23
5. Violence	25
6. Heart attacks and sudden illness	25
7. Other circumstances	26
Unnecessary Deaths on Public Works Projects	31
Immigrant and Latino Workers	34
Enforcement: Making The Rules Real	38
Recommendations	41
References	46
Additional resources	50
Glossary of Acronyms and Other Terms	53
Appendices	55
Sponsoring Organizations and Authors	67

Introduction

For years people have been coming together in late April in cities across Tennessee to observe Workers Memorial Day, honoring and remembering workers who have died from workplace injury and disease. In early 2011, two men died in quick succession while helping to rebuild the Henley Street Bridge. Since the shock of their deaths, Workers Memorial Day has taken on increased meaning for people in Knoxville, and its observance in that city and in other cities across Tennessee has become a more visible public event.

Last year for the first time a report was prepared to support these observances and to bring together both numbers and stories that shed light on the serious problem of workplace illness and injury in Tennessee. This report is thus the second in a series.

Workplace death and injury are not eternal or unchangeable facts of nature, not the sad but inevitable cost of doing business. Human effort, well-designed systems, and moral commitment can and do reduce the toll of occupational death and injury. Since the federal Occupational Health and Safety Act (OSHA) was first passed by Congress in the 1970s, death and injury on the job have been substantially reduced from previous levels. Hundreds of thousands of lives have been saved, and millions of serious injuries have been avoided. While this is cause for celebration, we also know the struggle for a safer workplace continues, especially in Tennessee.

Workers in our state continue to die of work-related injuries and illnesses at an alarming and unnecessary rate. Far too many of the deaths you will read about below could and should have been prevented. Workers are not and should not be treated as disposable cogs in someone's machine. We hope this report and the many efforts by workers themselves, by labor unions, worker centers, occupational health and safety professionals and activists, employers, and public officials will bring down these numbers dramatically in future years. But significant changes will be required. This report will conclude with specific reforms that we believe could make an important difference. These reforms can be true lifesavers.

We want to acknowledge the many people who provided guidance or information used in this report, although they are too numerous to call by name. Among them are the families of several workers whose stories appear below. The trust and generosity of family members who agreed to talk with us and to share knowledge about their loved ones have been a real gift to the project.

Likewise we are grateful to Knoxville Mayor Madeline Rogero and Knox County Mayor Tim Burchett for the joint proclamations they issued in 2012 and 2013 to mark official recognition of Workers Memorial Day in our community. And finally we want to thank publicly the government officials, inspectors and other government employees who work each day to see that health and safety laws are observed, thereby upholding the basic human right to a safe place to work.

Executive Summary

In Memoriam. The list that opens this report lists 167 known Tennessee worker fatalities that took place in 2012 and 2013. It was assembled from information gathered in federal Occupational Safety and Health Administration (OSHA) and Tennessee OSHA (TOSHA) sources, from the state Department of Labor & Workforce Development's workers' compensation division, from publicly available news sources, and from the work of groups that honor the fallen and support surviving family members. It is certain that this combined list fails to capture the full dimension of the problem.

Tennessee Worker Deaths: An Overview. Transportation, construction and manufacturing made up a large segment of the deaths identified for 2012 and 2013, as they did in the previous report covering 2011 and 2012. A significant number of cases involved heart attacks and motor vehicle accidents that were unlikely to be related to job conditions, but the vast majority of other cases involved hazards that with proper care can be eliminated or managed in a way that avoids death or serious injury. ***Overall occupational fatality rates reflected in federal statistics remain high in Tennessee -- averaging 37% above the national rate over the past four years.***

Unnecessary Deaths on Public Works Projects. Deaths in 2012 and 2013 demonstrate the continued importance of controlling hazards on public works. Public agencies need to do a better job of selecting contractors whose past performance and present management practice show a commitment to worker health and safety. Spring 2014 saw legislation introduced for the first time in the Tennessee General Assembly aimed at assuring greater safety in public contracting. The bill was withdrawn as part of an agreement with the state Department of Labor that it will soon convene work sessions with relevant agencies and interested parties on safety in public contracting.

Immigrant and Latino Workers. Hispanic workers continued to account for a disproportionate share of job fatalities. Although Latinos constitute less than 5% of the state's population, Latinos constituted 11% of worker deaths identified for this report. Latinos generally, and immigrant workers in particular, are employed in some of Tennessee's most dangerous and dirty jobs. Language barriers and precarious immigration status help explain this population's vulnerability. Our occupational safety and health systems and practices need to catch up with new demographics.

Enforcement: Making the Rules Real. In Tennessee as in the rest of the country, fines for violations of occupational safety and health standards are so low they barely constitute a nuisance when compared to the money an irresponsible employer can save by cutting corners on safety. At current staffing levels, it would take 69 years to investigate every covered worksite in Tennessee.

Recommendations, twenty-four in all, are directed at the federal, state and local government, as well as public and private employers.

In Memoriam: Tennessee Worker Deaths 2012 and 2013

The purposes of Workers' Memorial Day are two: to mourn for the dead and to fight for the living. Both goals are important to this Report, and in later sections our focus will turn to what can and should be done to protect the living. But the first goal has been our primary one in compiling the following In Memoriam list.

Because we aim to mourn the dead -- that is, to honor those who died in workplace fatalities, and to comfort families left behind -- we have leaned toward inclusion. The list therefore contains the names of workers who came to work here from elsewhere, and the names of Tennesseans who died while working out of state.

Similarly, the list includes people who died on the job -- without regard to whether the death was directly or primarily caused by the job, without regard to whether an employer was ever found legally responsible for the death, and without regard to opportunities for prevention. Some heart attacks, for instance, and other sudden illnesses experienced at work are almost certainly related to conditions at work, but many are not. We do not have the information to distinguish the factors leading to loss of life in such cases, and therefore, since we lean toward inclusion, this list includes all such events. We also include the self-employed.

Finally, despite our desire to be inclusive, we know there is one important category almost entirely missing from this list. We do include deaths from illness believed to have been contracted on the job in the few such cases we have found reported. However, statistics suggest that for every acute workplace fatality, ten times as many people die of occupational diseases.¹ Most of those cases go unrecorded.

Given the limitations of the sources and resources available to us, and given the lag time involved in many reporting systems, we have done what we conscientiously could to find all recorded relevant Tennessee fatalities for 2012 and 2013 that could be identified by name, along with a few where names are still "unknown." Nevertheless, it is certain that the two lists below do not include all cases and do not get every detail right.²

1 . For instance, a 2011 study by economist J. Paul Leigh of the University of California-Davis estimated more than 53,000 U.S. deaths in 2007 from respiratory, cardiovascular and renal diseases, cancer and other conditions that can be linked directly to workplace exposure (Leigh 2011). That figure is far in excess of the 4,383 U.S. fatalities from acute traumatic injury reported by the Bureau of Labor Statistics in its preliminary data for 2012.

2 . Cases were found primarily from three sources: the Tennessee Department of Labor Workers Compensation

Please take the time to pause and review this roll. Not only does it speak to the magnitude of losses suffered, it also reminds us of the tasks done by workers every day, and of the dignity and value of human labor.

Fatalities in 2012

A Partial List

	Date	Name	Age	Occupation/Employer	County	Incident
1	1/1/2012	Mary Province	56	Melaleuca, Inc.	Knox	<i>Chemical exposure</i>
2	1/4/2012	Keith Fields	54	Federal Express Corporation	Shelby	
3	1/11/2012	Ronald Arledge	50	Truck driver for bakery	Coffee	<i>Had apparent heart attack while driving and lost control of truck</i>
4	1/23/2012	Michael Harris	60	Maintenance tech	Davidson	<i>Collapsed at work</i>
5	1/23/2012	Renardo Jackson	32	Construction worker	Gibson	<i>Buried in debris from wall collapse</i>
6	1/25/2012	Martin O'Connell	50	Truck driver	Rutherford	<i>Truck rolled and pinned him against parked trailer at delivery</i>
7	1/27/2012	Paul Wachob	53	Truck driver	Rutherford	<i>Pinned between truck and coil he was off-loading</i>
8	2/7/2012	Howard Harless	70	Construction worker	Greene	<i>Fell 22 feet off roof of building</i>
9	2/7/2012	Felipe Roman	23	Warehouse worker (temp)	Shelby	<i>Crushed by 1500-lb roll of paper that slipped off forklift</i>

Division, the federal Occupational Safety and Health Administration (OSHA) and Tennessee OSHA (TOSHA). Also consulted were publicly available news sources, information provided by groups that provide support to families, a list of firefighter deaths maintained by FEMA, a list of law enforcement officers maintained by the Officer Down Memorial Page, and a list of fatalities from falls in construction maintained by the Center for Construction Research & Training. Each source has its holes, and some fatalities were undoubtedly missed. Railroad, federal, or maritime fatalities, for instance, may have been omitted.

10	2/9/2012	Michael Johnson	49	Highway construction worker	Sullivan	<i>Struck by vehicle, carrying pipe that obstructed view</i>
11	2/20/2012	Rickey Phillips	59	Truck driver	Campbell	<i>Drove truck off road</i>
12	2/21/2012	William Worley	60	Truck driver	Out-of-State	<i>Pulled truck over and died of heart attack</i>
13	2/22/2012	Steffanie Leonard	29	Soft drink sales rep	Davidson	<i>Head-on wreck with drunk driver on way to route</i>
14	2/23/2012	Michael Wells	57	Construction worker	Sevier	<i>Crushed in trench collapse at wastewater plant repair</i>
15	2/28/2012	George Davis	69	Jennings Farms Inc.	Rutherford	<i>Pinned under front tire of unattended tractor</i>
16	2/29/2012	Michael Peterson	50	Crete Carrier Corporation	Henderson	<i>Motor vehicle accident</i>
17	3/1/2012	George Morgan	58	Entrepreneur, musician, inventor	Out-of-State	<i>Heart attack while in Nevada on business trip</i>
18	3/2/2012	George Long	60	UT - Battelle, LLC	Anderson	<i>Cancer after exposure on job decades ago</i>
19	3/2/2012	Harold Graham	59	Alcoa Mechanical	Hamblen	<i>Suffered heart attack</i>
20	3/6/2012	Nicolas Cuevas	35	Refinery worker	Shelby	<i>Burned in flashfire after gas pipe explosion</i>
21	3/7/2012	Jeffrey Sherrill	44	GIS analyst	Bradley	<i>Killed in head-on collision</i>
22	3/8/2012	Nathan Johnson	31	Truck driver	McNairy	<i>Killed when lost control of truck and it rolled</i>
23	3/13/2012	Steven Wright	48	Truck driver	Campbell	<i>Killed in truck collision approaching road work ahead</i>
24	3/13/2012	Tom Kerley	47	Laminating supply employee	Knox	<i>Struck by a semi backing down driveway of workplace</i>

25	3/14/2012	Jerry Nance	67	County highway crew member	Maury	<i>Trimming trees in basket when faulty boom buckled</i>
26	3/18/2012	Jeremy Saxon	35	Driver	Out-of-State	<i>Found unresponsive in work vehicle on side of road</i>
27	3/21/2012	Darren Crossman	41	Equipment operator for utility co.	Out-of-State	<i>Operating tractor on a bank when it flipped</i>
28	3/26/2012	Abimael Contreras	31	Bridge worker	Marion	<i>Tripped and fell into water from barge, no safe walkway</i>
29	4/1/2012	Terry Ross	54	Truck driver	Madison	<i>Found dead of heart attack next to tractor trailer</i>
30	4/7/2012	Kenny Fox	39	Firefighter	Meigs	<i>Killed by roof fall inside burning building</i>
31	4/12/2012	Keith Frierson	44	Recycling worker	Maury	<i>Found in aluminum shredder</i>
32	4/18/2012	William Peden	64	Truck driver	Knox	<i>Heart attack</i>
33	5/3/2012	Dennis Dickey	53	Tennessee Farmers Cooperative	Tipton	<i>Collapsed and died</i>
34	5/4/2012	Joseph Johnson	61	Federal Express Corporation	Shelby	
35	5/7/2012	Larry Chubbs	54	Factory worker	Hamilton	<i>Fell into auger machine when catwalk failed</i>
36	5/7/2012	Cliff Shipley	57	Communications engineering	Trousdale	<i>Motor vehicle accident</i>
37	5/15/2012	Wilbert Paige	61	Truck driver	Shelby	<i>Found unresponsive in truck</i>
38	5/16/2012	Johnny Hart	78	Part-time truck driver	Out-of-State	<i>Rear-ended by semi and pushed into cars ahead</i>
39	5/19/2012	Pamela Desanto	45	ORNL employee	Anderson	<i>Lung cancer</i>

40	5/20/2012	Justin Maples	34	Police officer	Bradley	<i>Police cruiser went off road and hit utility pole</i>
41	5/25/2012	Cleveland Balentine	83	E T C	McNairy	<i>Struck by truck backing up in dock area</i>
42	6/13/2012	Dionicio Beltran	40	Truck driver	Shelby	<i>Crushed between lifting arm and body of garbage truck</i>
43	6/22/2012	Douglas Palmer	56	Sears	Sullivan	<i>Heart attack</i>
44	7/6/2012	Bradley Nicley	38	Truck driver	Humphreys	<i>Truck went off highway, severe storms may have been factor</i>
45	7/7/2012	Stanley Pruitt	54	Filter Specialists, Inc.	Hamilton	<i>Taken ill at work and died same day</i>
46	7/13/2012	Joey Taylor	36	Electrical lineman	Jefferson	<i>Came in contact with high-voltage line</i>
47	7/14/2012	David Morris	60	Tennessee Telephone Co.	Wayne	<i>Heart attack</i>
48	7/17/2012	Walter Luther, Jr.	47	Restaurant owner	Davidson	<i>Locked in walk-in freezer with dry ice</i>
49	7/18/2012	Keino Douglas	33	Security One, Inc.	Shelby	<i>Found in break room collapsed</i>
50	7/19/2012	Jose Hernandez	52	Roofer	Shelby	<i>Fell from steep roof</i>
51	7/21/2012	Hulet Ducker	74	Dandridge Golf & Country Club	Jefferson	<i>Fell from mezzanine inside a storage barn</i>
52	7/23/2012	Bruce Marion	29	Cable installer	Knox	<i>Struck by cable and knocked from bucket</i>
53	7/30/2012	John Roberts	41	Volunteer Trenching, Inc.	Anderson	<i>Killed when truck went off road and overturned</i>
54	8/20/2012	Roulos Davis	49	Firefighter	Hamilton	<i>Heart attack soon after arriving at work</i>

55	8/25/2012	Joanne Howard		Hotel employee	Blount	<i>Found unresponsive at work, died days later</i>
56	8/25/2012	Javier Valverde	34	Construction worker	Out-of-State	<i>Fell from roof of residential construction to concrete</i>
57	8/27/2012	Dennis Clow	60	Truck driver	Henderson	<i>Motor vehicle accident</i>
58	8/27/2012	Monica Clow	57	Truck driver	Henderson	<i>Motor vehicle accident</i>
59	9/6/2012	Isaac Meeks	34	Cell tower worker	Weakley	<i>Fell from cell tower, possible aneurism</i>
60	9/11/2012	Aquilino Vasquez-Martinez	52	Residential construction worker	Wilson	<i>Fell 9 feet from ceiling joist, no fall protection</i>
61	9/13/2012	Dale Gourley	37	Construction worker	McMinn	<i>On platform of aerial boom that tipped and fell</i>
62	9/17/2012	Grady Givens	40	Mowing company employee	Out-of-State	<i>Run over by mowing tractor on Ky hwy job</i>
63	9/20/2012	Larry Dunnivant	58	Sanitation worker	Marshall	<i>Fell from back of refuse truck</i>
64	9/24/2012	Nicholas Feller	28	Highway crew member	Bradley	<i>Hit by truck in pile-up where crew working</i>
65	9/24/2012	Charles Morgan	53	Truck driver	Bradley	<i>Collided with another truck in work zone</i>
66	9/26/2012	Jeremy Perkins	32	Coal miner	Claiborne	<i>Struck by falling boulder in mine ceiling collapse</i>
67	9/27/2012	Greg McKnight	50	Chemical plant worker	Shelby	<i>Burned in chemical explosion</i>
68	10/10/2012	Rodrigo Mena-Trinidad	31	Construction worker	Bradley	<i>Scaffold collapsed in construction of chemical plant</i>
69	10/10/2012	Hugo Mendoza	45	Construction worker	Bradley	<i>Scaffold collapsed in construction of chemical plant</i>

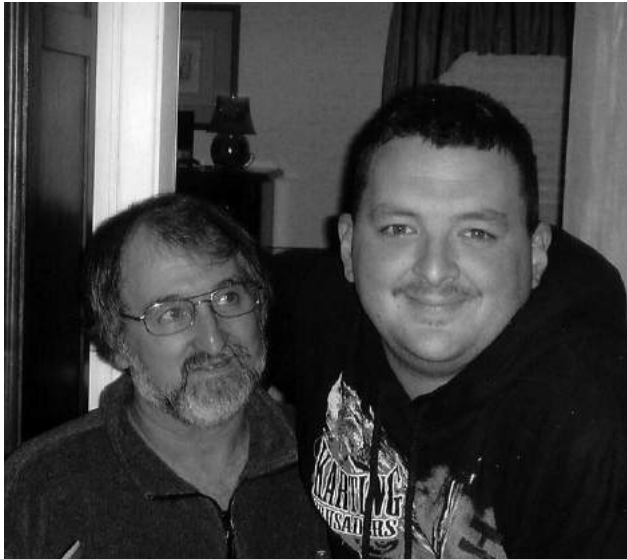
70	10/10/2012	Robert Solomon	52	Federal Express Corp.	Shelby	
71	10/12/2012	Dennis Holbert	53	Sheetmetal worker	Knox	<i>Died after exposure to epoxy particulate</i>
72	10/14/2012	Blake Cunningham	70	Musician and security guard	Shelby	<i>Shot at apartment complex while on duty</i>
73	10/23/2012	Jerry Roach	39	Mooresburg Forest Products	Hawkins	<i>Suffered heart attack while watching truck being loaded</i>
74	11/3/2012	Jeff Laird	40	Chemical operator	Shelby	<i>Burned in chemical explosion</i>
75	11/11/2012	Darell Livingston	51	Security officer	Shelby	<i>Heart attack on job at Ronald McDonald house</i>
76	11/27/2012	Aaron Wilkerson	45	Truck driver	Knox	<i>Killed when hydroplaning car collided with truck</i>
77	11/28/2012	David Ingle	56	Machinist	Franklin	<i>Appeared to faint when standing at work cart, died</i>
78	11/30/2012	Vicente Ramirez	28	Roofer	Campbell	<i>Fell from roof while approaching a co-worker</i>
79	12/3/2012	Chad Blankenship	32	Truck driver	Out-of-State	<i>Killed in collision with another semi in Mississippi</i>
80	12/3/2012	Daniel Tittle	50	Refinery worker	Shelby	<i>Chemical exposure when sight glass ruptured</i>
81	12/4/2012	Dayton Lauderdale	26	Driver	Sumner	<i>Motor vehicle accident</i>
82	12/5/2012	Herman Anderson	67	Truck driver	Out-of-State	<i>Rig went off Kansas road and jack-knifed in ditch</i>
83	12/9/2012	Tegan Papageorge	26	Driver	Montgomery	<i>Motor vehicle accident</i>
84	12/14/2012	Martovia Lang	32	Police officer	Shelby	<i>Shot to death serving drug warrant</i>

85	12/21/2012	Lazaro Melendez	47	Truck driver	Out-of-State	<i>Lost control of truck on icy bridge in Indiana</i>
86	12/31/2012	Michael Tallent	27	Construction worker	Knox	<i>Electocuted when crane hit high voltage lines</i>
87		Unknown	54	Contracted worker at auto factory	Franklin	<i>Crushed between robotic arm and conveyor</i>
88		Unknown				<i>Workplace violence</i>
89		Unknown	37	Roofer		<i>Fell from roof</i>

Fatalities in 2013

A Partial List

	Date	Name	Age	Occupation/Employer	County	Incident
1	1/2/2013	Richard Haga	41	Construction worker	Campbell	<i>Fell from scaffold onto concrete</i>
2	1/7/2013	Jackie Fryar	49	Nexus Partnership	Shelby	<i>Slipped and fell from a table while cleaning blinds</i>
3	1/12/2013	Archie Roberts	47	Driver	Johnson	<i>Suffered heart attack while driving</i>
4	1/25/2013	Michael Slagle	53	Highway patrol trooper	Knox	<i>Suffered heart attack after cruiser slid off icy road</i>
5	1/25/2013	Hong Dao	49	Driver	Shelby	<i>Run over while changing tire</i>



Rick Beck and his son, Justin

Rick Beck

Rick Beck was a longtime and trusted employee of Astec Industries in Chattanooga. Astec makes asphalt manufacturing plants and fabricates the large, very heavy components of the plants. Rick worked as a welder. He was responsible for moving large parts into position and welding them together. Early on the morning of May 10, 2013, he and a fellow worker were manipulating a silo head weighing three tons onto a set of rollers that held the components while they were being welded. A gap between the rollers caused the silo head to flip over and it struck Rick on the right side of the head. He was pronounced dead at the scene.

A proud member of the Choctaw Indian tribe, Rick was born in Oklahoma, and moved to Tennessee with his family in the early 70's, when his father's construction work brought him to the Chattanooga area. In 1973, not long after arriving, Rick met and married Jan who was his wife for forty years. Jan says the couple happily settled into country living in Turtletown, in the southeastern corner of Tennessee, not far from the borders with North Carolina and Georgia. Rick loved country life; his neighbors often saw him mowing the lawn or riding a golf cart around his property, accompanied by his English bulldog, Roscoe.

Rick was a quiet man who had many friends both at work and in his neighborhood. He enjoyed family life and was surrounded by close relatives who lived nearby. He was a member of First Baptist Church in McCaysville, Georgia. He was a graduate of Tri-County Community College in Jasper, Georgia.

For many years Rick built and raced Go-Karts. It was a hobby that he passed along to his son, Justin. Most weekends would find father and son at the local Go-Kart racetrack. In recent years they formed a kind of Go-Kart Dynamic Duo, with Justin doing the driving and Rick serving as a one-man pit crew. Justin followed his father in another important aspect of his life: he works at Astec Industries in Chattanooga, where his father had worked since 1978. In order to reach his own workplace each workday Justin must pass the spot where his father lost his life almost one year ago. Thus every one of Justin's work days includes a painful reminder of the accident that cost him his father--an accident that was entirely preventable.

The TOSHA investigation of the accident cited Astec for two serious violations that were directly related to Rick's death: (1) Astec's roller machine had gaps between the rollers that prevented the head sections of silos from being adequately supported while employees were working on them. (2) Astec also failed to ensure that affected employees wore protective helmets in the work area. For these two violations TOSHA assessed Astec a total of \$7,800.

6	1/30/2013	Joshua Colwell	34	Aloriconn	Rutherford	<i>Choked on a piece of food at work, died same day</i>
7	2/2/2013	Bryan Delk	41	Driver	Rutherford	<i>Killed driving loaded delivery truck in snow and ice</i>
8	2/18/2013	Mark Henes	60	Construction worker	Davidson	
9	2/20/2013	Vernon Sutton	49	Grocery store employee	Bradley	<i>Heart attack</i>
10	2/23/2013	Dave Ratslaff	74	Minister and funeral home employee	Shelby	<i>Collapsed while carrying flowers from van to gravesite</i>
11	2/25/2013	David Schnepf	43	Firefighter	Hawkins	<i>Died at home soon after fighting two structural fires</i>
12	2/28/2013	Chad Rogers	34	Highway crew	Hamblen	<i>Struck by truck on highway as he ran after hard hat</i>
13	3/4/2013	Joel Scott	53	Screen installer and repairman	Out-of-State	<i>Taken ill and died while working on screen porch</i>
14	3/13/2013	Bruce Summerlin	54	Human resource manager	Out-of-State	<i>Died of heart attack while on business trip</i>
15	3/16/2013	John Boyd	52	Truck operator at quarry	Rutherford	<i>Killed when truck went over edge of rock quarry</i>
16	3/23/2013	Aaron Vasquez	19	Restaurant employee	Shelby	<i>Stabbed behind restaurant while taking out the trash</i>

17 3/25/2013 **Gregory Simpson** 56 Restaurant manager Hamilton *Collapsed with heart attack shortly after getting to work*

18 3/25/2013 **Craig Miller** 59 Reg'l director health services company Rutherford *Car left road, struck bridge barrier, and overturned*

19 4/3/2013 **James McManus** 26 Welder and fabricator Hamilton *Struck by falling panel after welded hook broke*

20 4/5/2013 **Brian Hampton** 39 Truck driver Out-of-State *Found dead in his truck at a rest stop in Arkansas*

21 4/10/2013 **Paul Hulse** 62 Truck driver Out-of-State *Died in Little Rock*

22 4/17/2013 **Cody Bennett** 29 Landscaper Davidson *Killed when riding mower flipped on embankment*

23 4/18/2013 **Joel Pineda Muñiz** 24 Cement mason Sumner *Buried when poorly supported new wall collapsed*

24 4/18/2013 **José Velasco** 36 Laborer Sumner *Buried when poorly supported new wall collapsed*

25 4/22/2013 **David Haynes** 48 County grounds maintenance worker Maury *Killed when zero-turn mower turned over on slope*

26 4/25/2013 **Tan Van To** 45 Complete Automation, Lake Orion, MI Rutherford *Struck by falling electric panel at auto paint plant*

27 5/2/2013 **Lorrie Eckel** 49 Spotsylvania Towne Centre Davidson

28	5/5/2013	David McGiboney	64	Landscaping equipment operator	Williamson	<i>Killed when bobcat flipped over</i>
29	5/10/2013	Rick Beck	61	Welder in asphalt equipment plant	Hamilton	<i>Struck on side of head by part of silo he was welding</i>
30	5/20/2013	Steven Johnson	52	IT Project Manager	Out-of-State	<i>Cardiac arrest resulted in car crash during business trip</i>
31	5/22/2013	Allen Phillips	45	Financial analyst, taxi driver	Hamilton	<i>Struck by another vehicle while driving taxi</i>
32	5/26/2013	Joseph Gillentine	42	Williams Cabinet Co. Inc.	Rutherford	<i>Had seizure and fell at work, died a week or so later</i>
33	5/28/2013	Brian Crane	42	Truck driver	Madison	<i>Crushed betw semi and trailer while adjusting air pressure</i>
34	5/31/2013	Timothy Fowler	47	Sheet metal and air conditioning tech	Dyer	<i>Suffered a heart attack while working under a house</i>
35	6/4/2013	Michael Souviron	52	Owner of landscaping company	Rutherford	<i>Heart attack while on grounds of assisted-living facility</i>
36	6/13/2013	Roger Lee	43	Jake Marshall Service, Inc.	Hamilton	<i>Fell from a house</i>
37	6/16/2013	Michael Hooper	43	Auto worker	Rutherford	<i>Crushed by collapse of armature on robot</i>
38	6/24/2013	Zackary Rose	28	Medical resident in anesthesiology	Knox	<i>Found in call room, accidental overdose taken for sleep</i>

39 6/24/2013 **Carlos Frias** 27 Landscaper Rutherford *Killed when mower flipped over on embankment*

40 6/25/2013 **James McMullen** 61 Federal Express Corporation Shelby *Heart attack*

41 7/8/2013 **John Barker** 48 E & W Electrical Solutions, LLC Henry *Electocuted*

42 7/8/2013 **Namon Smith** 42 Tower technician from Tennessee Out-of-State *Fell from telecommunications tower in North Dakota*

43 7/10/2013 **Chris Humphreys** 31 RG Builders Davidson *Collapsed inside garage at work*

44 7/10/2013 **Joe Trevathan** 68 Equipment operator Obion *Fell from 60-foot ledge while operating bulldozer*

45 7/19/2013 **Tarry Hay** 61 Truck driver from Florida Wilson *Died while on work trip in Tennessee*

46 7/20/2013 **John Meyer** 51 Bridgestone America's Tire Rutherford *Died after caught in machine*

47 7/20/2013 **Joseph Williams** 32 Black Lion Security LLC Shelby *Shot three times in the chest*

48 7/26/2013 **Charles Flynn** 42 Driver for beverage service Out-of-State *Lost control when cut off by other driver in Arkansas*

49 8/3/2013 **James Long** 59 Truck driver Out-of-State *Truck ran off upper deck of Tx freeway, fell, caught on fire*

50	8/6/2013	Joe Williams	57	Airline executive	Out-of-State	<i>Died in Minnesota while on business trip</i>
51	8/10/2013	William Davis	53	Custom Foods of America	Knox	<i>Heart attack after clocking out of work</i>
52	8/15/2013	Joseph Jones	44	Driver	Madison	<i>TDOT truck crashed, rolled down embankment, hit tree</i>
53	8/19/2013	Justin Bass	31	Window cleaner	Jefferson	<i>Washing windows when aerial lift tipped over</i>
54	8/22/2013	John Spall	38	Grimes Recycling Center	Lawrence	<i>Killed in single-car accident while driving company car</i>
55	9/8/2013	Iran Morales		Painter	White	<i>Fell from scaffolding on city water tower</i>
56	9/17/2013	Kevin Bellamy	53	Truck driver	Out-of-State	<i>Found dead in his truck in Wisconsin</i>
57	9/17/2013	Antonio Powell	29	Vanderbilt Landscaping LLC	Tipton	<i>Hit by semi truck that crossed highway</i>
58	9/19/2013	Steve Conner	53	Seneca Medical Inc.	Anderson	
59	9/21/2013	Billy Russell	46	Frito Lay, Inc	Lincoln	<i>Became ill at work</i>
60	10/2/2013	Richard Floersch	56	Firefighter	Gibson	<i>Found unresponsive after heart attack at fire station</i>

61	10/4/2013	John Shelley	42	Self-employed home remodeler	Shelby	<i>Shot during robbery by intruders while alone at job site</i>
62	10/16/2013	J Jackson	65	AT&T Services, Inc.	Williamson	<i>Found deceased in the workout room</i>
63	10/18/2013	Abdolreza Zaltash	54	Senior R&D staff at ORNL	Knox	<i>Acute myeloid monocytic leukemia</i>
64	10/20/2013	Amanda Chitwood	34	Wm Wrigley Jr. Co.	Hamilton	<i>Fell from a ladder and onto the floor</i>
65	10/20/2013	Juan Agustin-Ruiz	20	Chris Tuck Farms	Macon	<i>Killed in motor vehicle accident</i>
66	10/22/2013	Denise Adams	43	Respiratory therapist	Fayette	<i>Killed in air ambulance crash, on way to pick up young boy</i>
67	10/22/2013	Carrie Barlow	43	Pediatric nurse	Fayette	<i>Killed in air ambulance crash, on way to pick up young boy</i>
68	10/22/2013	Charles Smith	47	Helicopter pilot	Shelby	<i>Killed in air ambulance crash on way to pick up young boy</i>
69	11/8/2013	Ashley Seus	24	Counselor for people with disabilities	Montgomery	<i>Car hit from behind and pushed into on-coming traffic</i>
70	11/12/2013	Earleen Garrett	61	Employee of security company	Shelby	<i>Found unconscious after she called to say light-headed</i>
71	11/21/2013	Raymond Schulz	54	Truck driver	Shelby	<i>Found face-down in parking lot, died same day</i>

72	11/22/2013	Moises Cedeno	32	A & S Electric	Davidson	<i>Shot by attacker while sitting in company van on break</i>
73	12/8/2013	Janet Mays	58	Employee of non-profit serving children	Shelby	<i>Collapsed and had seizure at work, died three days later</i>
74	12/17/2013	Rubin Coffey	36	Truck driver	Out-of-State	<i>Truck went off highway in Kentucky and overturned</i>
75	12/17/2013	Ronald Ray	61	Sheriff's deputy	Shelby	<i>Heart attack working DUI checkpoint, died 3 days later</i>
76	12/21/2013	Terry Baxter	53	Truck driver	Cocke	<i>Heart attack while hooking up truck to trailer in parking lot</i>
77	12/22/2013	Samuel Martin	77	Part-time facilities services employee	Shelby	<i>Collapsed at work on break, paramedics could not revive</i>
78	12/24/2013	Rosalie Parks	49	Shipping company employee	Davidson	<i>Trying to break a jam, fell on rollers, hurt neck, later died</i>

The information sources available to us, as to other advocates around the country, are incomplete and sometimes difficult to work with, especially in the first year or two after a fatality. We hope that reporting systems soon improve in ways that will help us to produce more prompt, complete and accurate In Memoriam lists in the future. We sincerely apologize if your co-worker, employee or loved one was omitted from this list despite suffering an occupational fatality in 2012 or 2013, if any name was wrongly included, or if other details are in error. Please help us correct the record. Send accurate information to <fran.ansley@gmail.com>.

Tennessee Worker Deaths: An Overview

Names and People

We do the work to build this list because we believe it is important to name these names and to individually mark these deaths. Each entry on the list represents a person with his or her own story, someone torn too soon from family and friends.

Eventually, the U.S. Bureau of Labor Statistics will release more extensive information it has been able to gather on 2013 deaths, and its statisticians will be able to analyze the data and compare it to the record in other states, and to that of the nation as a whole. Eventually as well, TOSHA will post a list of specific Tennessee fatality investigations it undertook in 2013, along with summary descriptions.

However, much of the data eventually released will be purged of names. And much of it will come too late to provide much comfort to those suffering recent loss. So we do this work as best we can. We also join others around the country in calling on federal and state authorities to find more timely and helpful ways of making this important information available to the public.

We hope that the list itself, and the handful of personal stories included at other spots in this Report, will provide some sense of these individuals and of those they left behind. The costs of such losses can and should be counted in dollars, and we will discuss those kinds of costs below. But each life lost was also priceless, and cannot be rightly be quantified in dollars and cents.

Numbers and Patterns

Nevertheless, in order to reduce the toll of workplace hazards in the future, it is also important not only to memorialize, but also to count and analyze. Taken as a group, and scanned for patterns, these cases as a whole, though incomplete, may help us to identify what hazards are harming workers in our state, and what can be done to eliminate or better control them. So this section will undertake a preliminary scan, focusing primarily on the types of incidents and hazards the list reveals.

Note that the Bureau of Labor Statistics, in its Census of Fatal Occupational Injuries (CFOI), already preliminarily reports 100 fatalities in Tennessee for 2012, compared to only 88 we have been able to identify from 2012 for the In Memoriam list above. When the CFOI numbers for 2013 are eventually released, they too will almost certainly be higher than the 2013 number reflected in the list above. The two lists above contain a total of 167 occupational fatalities, 89 identified for 2012 and 78 for 2013. Demographic distribution of these injuries reflects national trends. Of the 164 cases where

Howard Harless

Howard Harless worked as a crew leader for Ron's Millwright Service. On the morning of Feb. 8, 2012, Harless and his crew were repairing the metal roof of the Five Rivers Industrial Complex on Snapps Ferry Rd. in Greenville. As the crew was getting into position to move a 40 ft roofing panel, Harless stepped on an unsecured end of a panel, which gave way under his weight. He fell 23 ft. to his death. Harless was 70 years old.

Born in Rogersville, Howard learned the millwright trade as a young man and practiced it throughout his adult life. For many years he owned his own millwright business. In 2004 he sold his business and retired to care for his daughter, Pamela, who was ill with cancer. When Pamela died Howard resumed working at the trade he loved. "He was a caring and compassionate individual who would do anything for others," said a co-worker at the scene of the accident. "We are completely devastated."



Howard was a family man. He and his wife, Peggy, raised two daughters and a son. He was active in his church, Highpoint Baptist Church in Meadowview, Va., where he regularly taught Sunday School. Howard served in the U. S. Army in Germany after graduating from high school.

Always active, Howard loved to work with his hands and could build anything. Peggy has several dogs. She said she asked Howard to build them a house. Much to her surprise, he built them a real house, with miniature living room, bedroom, air conditioning, etc.! Howard was a devoted gardener. He and Peggy grew and canned much of the food that got them through the year.

He loved to hunt and fish. He owned a farm in the Rogersville area which he used as a camp for hunting in the fall and fishing in Cherokee Lake throughout the year.

TOSHA investigators found six serious safety violations at the worksite, including failure to use safety belts and lanyards to prevent falls, and not providing covers to roof holes and openings adequate to support the weight of workers, equipment and materials. Ron's Millwright Service was fined a total of \$14,800 for the violations.

names are known and can be used as a rough guide to gender and ethnicity, 14 of the fatalities (9%) were women and 18 (11%) were Latinos.

1. Motor vehicle accidents and workers struck by vehicles

The largest category of clearly occupational cases is "motor vehicle accidents," defined here as fatalities where the deceased worker was on the job and was either a driver or passenger on a public road. Sometimes these cases -- which numbered 35 in all, some 21 percent -- involved a business trip by a manager or other office employee. However, most often those who die on the road at work are professional drivers.

Of course many hazards encountered by professional drivers on the road are not under the employer's control. These kinds of hazards -- everything from encounters with drunk drivers to design of highways and highway work zones -- are probably best analyzed and prevented as part of society's general effort on highway safety, with suggestions for improvement coming primarily from experts in that field. This implied division of labor makes some sense, and TOSHA typically does not investigate the deaths of transportation workers killed in vehicles on public highways.

Nevertheless, adequate maintenance of equipment, proper training, and reasonable rules regarding hours and mileage do fall within a transportation employer's area of responsibility, and how such an employer carries out its duties can make a fatal difference for its own employees and for the motoring public as well. In any case, the number of workers killed in vehicles on public roadways each year is surely a sobering reminder that for many workers in this important sector of our economy, their routine workspace, day in and day out, is filled with huge deadly objects hurtling toward or past them at high speeds.

Professional drivers are not the only workers at risk of dying in an encounter with a vehicle. Another important category consists of those who make their living laboring in highway work zones. Fatalities in such areas often happen to a worker who was not in a vehicle at all, but was rolled over or run into by some vehicle in the zone -- sometimes an intruding car or truck from the general public, or sometimes a work vehicle also involved in the project underway -- for instance paving a road, mowing a right-of-way, or installing utilities. At least five Tennessee workers struck by vehicles in 2012 and 2013 appear to have been working in highway work zones at the time. A sixth was struck by a cable that was put into motion by a pick-up truck that drove into an unflagged work zone where the crew was working on a city street (Magacs; TOSHA 2012 summary fatality description #20).

At a national level, the U.S. transportation industry is typically the sector in our economy that has the largest number of workplace fatalities every year. So the large proportion of worker deaths on our list that are either motor vehicle accidents or vehicular "struck-by" cases is no surprise. ***But the CDC reports that over the 10 years from 2003 through 2012, Tennessee had the fifth highest number of worker deaths in highway work zones of all states in the country*** (Centers for Disease Control and Prevention). The Tennessee Department of Transportation and Department of Labor should actively collaborate to improve our state's record in this regard.

2. Falls

A second important category of cases on this list is workplace falls. We identified twenty Tennessee workers who died from fatal falls in this period, about 12% of the total. A majority of these fatalities involved falls from heights in construction. Five men, including Howard Harless, whose story appears in this report, fell from roofs of homes and other buildings. Four fell from scaffolds, one "from a house" (perhaps another roof), and one from a ceiling joist in residential construction. Abimael Contreras, also featured in this report, drowned after he fell as he attempted to cross from one river barge to another, using the only route provided to workers on this job, a path that did not have a safe walkway across a sizable gap over deep water.

Federal OSHA recognizes the magnitude of the problem and has called for a national "stand-down" on construction falls, slated for June 2-6, 2014. In issuing the call (<https://www.osha.gov/StopFallsStandDown/index.html>), OSHA observed:

Fatalities caused by falls from elevation continue to be a leading cause of death for construction

workers, accounting for 269 of the 775 construction fatalities recorded in 2012. **Those deaths were preventable.** Fall prevention safety standards were among the top 10 most frequently cited OSHA standards, during fiscal year 2012 (OSHA 2014, emphasis in original).

Falls occur outside construction as well. Two workers on our list fell from communication towers, incidents that are becoming all too common as the telecommunications world goes ever more wireless.³ Two men fell into dangerous industrial machinery -- one of them Larry Chubbs, whose story appears elsewhere in this report. Other cases varied: one worker fell from a barn mezzanine, one from a ladder inside a facility, one from a sanitation truck.

The overwhelming majority of falls from elevation can be prevented, but prevention requires commitment from management on down. The Stop Construction Falls Campaign has developed materials aimed at workers and employers, and it promotes the slogan of “Plan, Provide and Train” -- that is, plan ahead for safety, provide the right equipment, and train everyone to use it. This is not rocket science, but it requires sustained attention, disciplined behavior from all those involved, and a willingness to invest in the present for long-term saving.

Meanwhile, job sites exist all over the state of Tennessee where fall protection measures -- such as guardrails, safety nets, or personal fall arrest systems properly tied off -- are either absent altogether, or improperly employed. To its credit, TOSHA has adopted a special emphasis program on falls, but the impact of the program is limited when the number of inspectors remains so low in proportion to the number of worksites where fall hazards exist.

3. Encounters with Machinery

A significant number of cases in 2012 and 2013 involved some problem with machinery or its operation. Five men were killed when large machines they were operating flipped over: two were on mowers, one on a tractor, and another on a bobcat. Circumstances are not known in each case, but slopes or embankments seemed to be a factor in some of them. The high incidence suggests that stronger training and supervision are likely needed.

In three disturbing cases robotic armatures behaved in unexpected ways, crushing or pinning workers who were attempting to repair or operate them. Again, the circumstances are not presently known to us, but there may have been inadequate lock-out-tag-out procedures (lock-out-tag-out refers to safeguards designed to ensure that dangerous machines are safely shut off and not started up again during maintenance or servicing).

In another three cases workers died from problems with the operation or proper inspection and maintenance of aerial booms. Two of these boom trucks tipped over, and a third boom collapsed in mechanical failure.

4. Other “Struck-By” Incidents

Falling objects. Workers struck or dropped to the ground by their own machines are not the

³ . Cell tower falls have caught the attention of federal OSHA, which announced in February of this year that it is concerned about “the alarming increase in preventable injuries and fatalities at communication tower worksites. In 2013, thirteen fatalities occurred in this industry, more than in the previous two years combined. This disturbing trend appears to be continuing, with the four worker deaths occurring in the first five weeks of 2014.” https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=NEWS_RELEASES&p_id=25593. (See also Knutson and Day 2012; Day 2012.)

only ones who lost their lives from impacts with objects in the workplace. Two men were killed in Tennessee factories when panels fell on them. Another man -- Rick Beck, whose personal story appears elsewhere in this Report -- died when he was struck by a large piece of equipment he was welding. A fourth was crushed when hit by a 1500-pound roll of paper that slipped from a forklift.

Other types of struck-by incidents that take far too many lives are those that involve structural collapse of walls, trenches, or excavations. These incidents are particularly distressing because the methods for avoiding them are well known. Our state saw several of these cases during 2012 and 2013.

Wall collapses. For instance, three men were killed unnecessarily in wall collapses. Two Latino workers were hurt in the same incident, when an inadequately supported masonry wall under



Larry Chubbs

Larry Chubbs worked at TAG Manufacturing in Chattanooga, a company that makes metal components of large construction equipment. On May 8, 2012 Larry was operating a blasting machine that cleans and descales large steel parts. He lost his life when an unsecured floor panel of a catwalk gave way and he fell into the machine's moving parts. The Chattanooga Times Free Press reported that "When workers found Chubbs' body in the machine, they found the panel from the catwalk with him." He was 54 years old.

A soft-spoken, handsome man, Larry Chubbs was born in Chattanooga and spent his entire life there. Larry and Annette, his former wife, raised two children, Frederick and Kimberly, both grown and living with their families in Chattanooga. He was friendly and caring--the kind of man that people turned to for help. In an outpouring of sympathy and grief, Larry's co-workers at TAG Manufacturing raised money

to help his family in the aftermath of his death. Larry was a long-time member of Union Hill Baptist Church in Chattanooga.

Annette and Kimberly were quick to identify Larry as an athlete. He loved basketball and baseball, played both sports on school teams at City High, and continued to play throughout his life. Kimberly remembers all the times Larry took his granddaughter Shawnquell to the park to play baseball. Inspired by her grandfather, Shawnquell hopes to play basketball for the Lady Vols.

TOSHA fined TAG Mfg. a total of \$15,850 for six serious safety violations, including failure to secure the catwalk floor panels, and six "nonserious" violations. Ironically, Larry's body was discovered by co-workers who came looking for him when he failed to show up for a safety meeting.

construction literally blew over in a strong wind (TOSHA Inspections # 137-146-124, etc. on Pineda and Velasco). The third man was standing in an excavated area that was to become part of a city park, when the wall of an adjacent building collapsed, and he was buried in ten feet of rubble. No shoring, bracing or underpinning had been provided to ensure the stability of this adjoining structure during the excavation. (Collins 2012; Wilkerson 2012; TOSHA 2012 summary fatality description # 1)

Trench collapse. Another man, Michael Wells, whose personal story is featured elsewhere in this report, died in a preventable trench collapse at a wastewater facility in Gatlinburg. At the time he was killed, Mr. Wells was helping on a massive repair job at the site of the catastrophic collapse of a containment basin, a 2011 incident that had already taken two workers' lives. OSHA reports that nationally the fatality rate for those doing excavation work is 112% higher than the rate for those in general construction (OSHA, Trenching and Excavation).

Roof fall in mine. Another kind of structural collapse took place in an underground coal mine in Claiborne County in 2012. A Kentucky man was killed when an unsupported portion of the mine roof fell, pinning the young miner to the floor. The company was cited by the Mine Safety and Health Administration for inadequate training and for failing to ensure that miners were complying with relevant standards related to the mine's stated roof-control plan. (MSHA Inspection 2012)

5. Violence

Seven workers died from violent physical attacks by other persons at the worksite. A famous Memphis musician and part-time security guard was shot dead by intruders at the apartment complex where he was working. A police officer was shot and killed when she attempted to deliver an arrest warrant in a drug case. A restaurant worker was stabbed in an alley where he had gone to take out the trash. A self-employed home remodeler was killed by intruding robbers who found him alone on the job.

As was reported last year in *Tennessee Workers Dying for a Job*, the problem of violence in the workplace is a topic of increased interest and concern. Occupational health and safety professionals point out that some cases of violence on the job should be analyzed not only as matters for the criminal justice system, but also as matters of workplace safety.

For instance those who do night work, who labor in isolated situations, or who have custody of cash, are particularly vulnerable and attractive to criminals who enter the workplace to commit crime. For other people such as mental health workers, police officers, security guards, and some hospital staff, interaction with unstable or otherwise risky individuals is a normal part of their job duties, and they may suffer violent attack at the hands of people they serve or are tasked with controlling.

Effective prevention measures vary with the context and with the type of violence involved. TOSHA does not ordinarily investigate cases of criminal assault, but there are instances where investigation is now considered appropriate, and in 2012 the agency adopted specific procedures (TOSHA 2012).

6. Heart attacks and other sudden illness

Heart attacks and other cases of sudden illness or collapse at work number 47 cases on this report's In Memoriam lists, making up a significant portion of the whole, about 28%. The facts in many of these cases are sketchy, but they seem to range from obvious heart attacks, through other circumstances, including workers found dead or unresponsive, going into seizure, or choking on a bite of food while

on break. Many of these sudden-onset attacks were not likely to be related to work in any significant way other than simple presence at the worksite.

Accordingly, many of them should be set aside when it comes to seeking patterns that could point the way to better practices at the workplace. As with motor vehicle accidents and cases of homicide, the questionable connection to employer practice is a reason TOSHA does not typically investigate these kinds of fatalities.

On the other hand, working conditions are likely to have played a major role in some of these cases. For instance, two firefighters died of heart attacks at their places of work, and a third died at home shortly after battling two structural fires. For multiple reasons, firefighters are known to suffer a highly elevated risk of injury and death from heart disease, which kills more firefighters than burns and smoke inhalation combined. Effective strategies for reducing these risks are and should be under investigation. (Kales et al 2007)

Similarly, seven of the heart cases were truck drivers who appear to have died of heart attacks while on the job. Truck drivers, especially those who drive long distances over the road, are also known to carry a higher-than-average risk of heart disease and a number of other conditions or illnesses. (Sieber et al 2014)

Further investigation about ways a person's work may contribute to a heart attack, and advice for different industries about ways they can reduce risk factors that affect employee health will need to focus on particular sectors and will need access to much more detailed information than that available about the Tennessee cases on our lists above.

7. Other circumstances

Other fatalities on the In Memoriam lists span a range of circumstances. The number of fatalities in each set of circumstances is smaller than in some of the categories mentioned above, but they are worthy of mention because the hazards they highlight are continuing and serious, sometimes posing risks that could reach catastrophic proportions for workers and for surrounding communities.

Electrocutions. Three men were electrocuted on the job during this three-year span, at least two of them when they came in contact with high-voltage lines.

Flash fire and chemical spray. Two men died in two separate incidents at an oil refinery. One was a contract worker burned over 90% of his body in a flash fire that burst from a pipe during a botched turn-around procedure that was supposed to capture flare gas and allow it to be re-used. The second man died after a sight glass ruptured, engulfing him in hydrofluoric acid, a highly hazardous, toxic and corrosive chemical used as a catalyst in the refining process, although safer alternatives are available (Tony Mazzocchi Center, et al, 2013). Despite decontamination procedures that were begun within 1-2 minutes of this incident, the worker died of chemical burns. (TOSHA 2012 summary fatality descriptions #9 and #31).

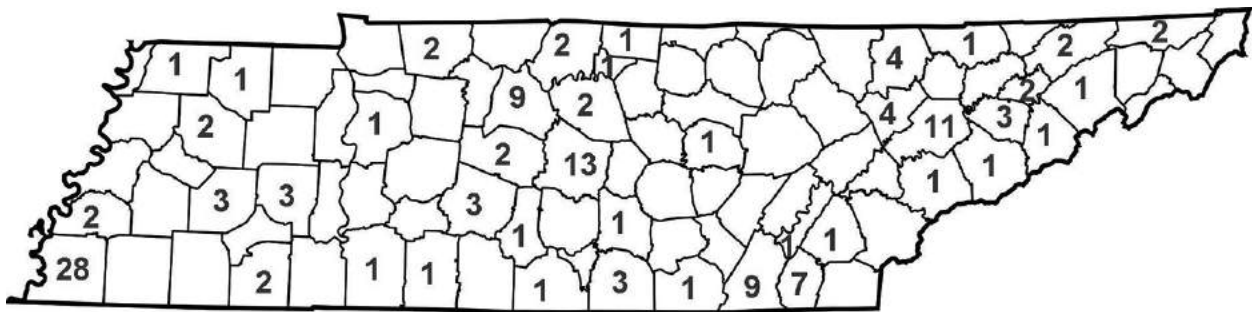
Chemical explosion. Two men died of burns they suffered when a runaway reaction at a chemical plant caused an explosion of flammable liquids. The tank involved contained some 2400 gallons of chemicals, and when it exploded, fire spread throughout the building and caused structural damage to the facility. (TOSHA 2012 summary fatality description #26) The explosion understandably stirred concern among members of the surrounding low-income African-American community, an example

of the way workplace hazards can spill over into the larger community (Miles 2012).

Places

Workplace fatalities are not spread evenly over the state. Of course the largest number of cases cluster around major population centers. Shelby County is by far the most deadly county in the state for workers. For 165 of the cases on the In Memoriam lists, a location has been identified. Twenty-one Tennessee workers on this list died out-of-state. Those with a known in-state location are shown on the map below.

Figure 1. Fatalities from In Memoriam List, by Tennessee county



Comparisons

To make valid comparisons over time, and to compare Tennessee to the rest of the country, we must turn from the In Memoriam lists of Tennessee fatalities compiled specifically for this Report and look instead to federal data. The Bureau of Labor Statistics (BLS) provides information on fatalities, fatality rates, deaths by industry, and much else.⁴

Trends over time. The total number of Tennessee fatalities in 2012 as reported by the U.S. Bureau of Labor Statistics in its most recent Census of Fatal Occupational Injuries (CFOI), which is still preliminary, was 100. That preliminary total is down by a significant number from the number of fatalities recorded by CFOI in the preceding four years, when the totals were 120, 138, 111 and 135 respectively (Table 1). *That indication of improvement is welcome news.*

Different from the total *number* of fatalities is the *fatality rate*. Tennessee's overall job fatality rate as determined by CFOI has remained fairly constant in recent years, about 5.0 per 100,000 workers.

How Tennessee compares to other places. Though some of the above indicators are encouraging, significant cause for concern remains. *Tennessee's fairly stable fatality rate of around 5 per 100,000 compares unfavorably to a rate of 3.5 for the United States as a whole in 2011, the latest year for which CFOI rates are presently available.⁵ The degree of Tennessee's difference has varied from 29% to 50% higher than the national rate during the period from 2008 to 2011 (Table 1).*

4 . Bear in mind that because of differences in data collection and in criteria for inclusion, this report's In Memoriam lists will include deaths excluded by the BLS and vice versa.

5 CFOI data for 2012 are still preliminary. Final numbers of fatalities will not be released by the Bureau of Labor Statistics until April 2014, and BLS does not calculate state fatality rates until that time -- too late for inclusion in this Report.

Table 1. Fatality Rates* in Tennessee and U.S. 2008 to 2011

	Total Fatalities	Tennessee Rate	National Rate	TN % above National Average
2012	100			
2011	120	4.5	3.5	29%
2010	138	5.4	3.6	50%
2009	111	4.5	3.5	29%
2008	135	5.1	3.7	38%
5-year total	604			
4-year average rate		4.9	3.6	37%

* Per 100,000 full-time-equivalent workers (an hours-based rate) Source: CFOI (data for 2012 preliminary)

Deaths by Industry

The five industrial sectors with the largest number of workplace fatalities reported by CFOI for Tennessee in 2012 (the latest year for which data are presently available, and still only in preliminary form at this writing) were: transportation and warehousing; followed by construction; manufacturing; administrative and waste services; and a combined category of agriculture, forestry and fishing. In 2011, construction had the highest number of reported fatalities in Tennessee, followed by transportation and warehousing, then manufacturing and agriculture, forestry, and fishing with the same number, followed by administrative and waste services.

The fatality rates in two Tennessee sectors -- in construction and in agriculture, forestry and fishing -- appear particularly elevated, as tables 2 and 3 illustrate. The 2011 rates (the most recent year for which rates are available) show an improvement over the alarming spike in construction deaths in 2010. But the rate in 2011 is still higher than either 2008 or 2009, and it continues to compare unfavorably to the 2011 rate for the nation or for neighboring Virginia.

Table 2. Fatality Rates for Construction (per 100,000 full-time-equivalent workers)

	Tennessee	Virginia	National
2011	12.9	6.4	9.1
2010	19.0	5.9	11.8
2009	10.9	8.0	12.4
2008	12.5	9.2	11.8

Table 3. Fatality Rates for Agriculture, Forestry, Fishing
(per 100,000 full-time-equivalent workers)

	Tennessee	Virginia	National
2011	42.4	33.9	24.9
2010	55.5	22.6	27.0
2009	53.2	29.8	25.8
2008	68.3	39.1	28.4

In 2012, the total number of fatalities preliminarily reported by CFOI in Tennessee’s combined agriculture, forestry, and fishing sector dropped significantly -- by half compared to the number finally reported for 2011. Tennessee’s fatality rate for this sector in 2011 (the last year for which state-level rates are available) also dropped. For the first time during the four-year span captured in Table 3, Tennessee’s rate was no longer over twice the national rate. But even with that welcome improvement, Tennessee’s rate of fatalities in agriculture, forestry and fishing in 2011 remained much higher than that of Virginia or the nation as a whole. In any case, across all states, the fatality rates in this sector show that agriculture, forestry and fishing are extremely dangerous industries for workers.

Costs

Costs of occupational fatalities in terms of physical and emotional pain and loss to workers themselves and to their families and friends are by their nature incalculable. Other kinds of costs are easier to count if relevant facts are known. However, only sketchy cost information is available about most cases on our list, and the list itself is incomplete -- especially with regard to occupational illnesses, many of which come with the heavy expenses associated with prolonged disability and treatment. (Leigh 2011)

One partial estimate of the cost of occupational injuries in Tennessee has been produced, however, and its focus is the construction sector. That estimate can serve as at least one indicator of the magnitude of the impact of unsafe working conditions on the economic health of the overall community. Researchers at Public Citizen recently calculated the cost of fatal and non-fatal injuries experienced by Tennessee construction workers during the years 2010-2012. Using injury and illness data from the federal Bureau of Labor Statistics, they concluded that such injuries imposed a cost on the Tennessee economy of some \$540 million (Wrightson letter to Rep. Mike Stewart, Feb. 28, 2014 -- Appendix A).

Michael Tallent

Michael Tallent had turned 27 only a month before the accident that took his life. Michael was working as a crane operator's helper for W&O Construction Co. at the Ku-wahee Wastewater Treatment Plant, a Knoxville Utilities Board facility on Neyland Dr. in Knoxville. on New Year's Eve, 2012. As the crew began to move a load of sheet metal pilings, the crane's main hoist line came into contact with overhead powerlines, resulting in Michael being struck by a fatal bolt of electricity.

Michael left behind a six year old daughter, Kylie Sue, whose mother and Michael had been separated for some time. For the last year of his life Michael had been living with his parents while he looked for work. He had been employed by W&O Construction Co. for about two and a half months when the accident occurred. Michael was a simple man. Generous and friendly, he was a hard worker who was well-liked by his co-workers. He was planning to train as a welder and looked forward to a career in the construction industry. He came from a tight-knit Knoxville family; he enjoyed helping his parents raise younger children and grandchildren. Michael's father, Rocky Tallent, says his son was an avid fisherman. He also loved to write poetry, and he left behind him a great many poems, which are a consolation to his family for this son they lost far too early.



The TOSHA investigation of the accident that took Michael's life charged W&O Construction Co. with ten serious safety violations and fined it a total of \$24,000. The safety violations included allowing untrained and unqualified employees to work as qualified crane operators, riggers and signal persons. TOSHA investigators concluded that all ten safety violations "were specifically associated with Mr. Tallent's death."

After the accident, the Knoxville News Sentinel reported that W&O had been cited for TOSHA violations 11 times since 2009. That history certainly raises questions as to what KUB knew about W&O's deplorable safety record when it entered into a contract with that company, or what it could have known if it had looked into the matter.

Unnecessary deaths on public works projects

Among those who have died on the job, a string of dramatic cases in recent years involved men who were killed while building or maintaining vital pieces of Tennessee's public infrastructure. Because these deaths struck down workers who were doing the public's work at public expense, and because public decisions contributed to putting these workers in harm's way, the public should examine these disturbing cases with particular care.

TDOT projects and the Britton Bridge/Mountain States family of companies

As recounted at more length in last year's report, from November 2010 to March of 2012, four workers were killed on bridge projects across the state. All four were on projects initiated by the Tennessee Department of Transportation (TDOT), and all four worked on projects where TDOT had contracted with Britton Bridge LLC, its close affiliate Mountain States Contractors, or both. (Harris; Hickman and Jacobs, Jan. 25 and 26, 2011, and May 26, 2011; Alund, Jan. 2012; Jacobs, March, 2012)

As the death count continued to mount, these fatalities on public projects delivered a series of shocks to the communities where they took place. TOSHA found serious violations directly related to the death in each case, so hard questions about safety on public works projects were immediately on the table (TOSHA Inspections on Mendez, Womac, Estrada-Jimenez, and Contreras). Three of the four men who died were Latino immigrants, so questions about working conditions faced by immigrants in the state were similarly sharp.

Last year at Workers Memorial Day events, speakers highlighted this outrageous saga and called for a change in the way TDOT and other agencies let contracts on construction projects, echoed by several recommendations in last year's Workers Memorial Day report. Since last year, the story has continued to unfold. One earlier and one later link must now be added to the deadly chain of related incidents.

The earlier link dates back to December 2005. At that time we now know, yet another worker, 25-year-old Mario Perez, also employed by Mountain States Contractors, was killed on yet another construction project initiated and funded by TDOT. Mr. Perez was buried in a trench collapse in a situation so extreme in its disregard for the lives of workers that TOSHA announced a \$147,000 penalty -- an unusually stiff fine by TOSHA standards. TOSHA cited the company for willful violations of safety standards on trenching and excavation, as well as failure to properly train its employees. (TOSHA Inspection # 309-634-178)

The later link in the chain that must be added to the story of deaths on TDOT bridge projects took place in 2013 on a TDOT project in Nashville where Mountain States was a sub-contractor on the job. This incident occurred in Gallatin, less than a month after Workers Memorial Day last year. It was different in two ways. This time the incident did not directly involve a worker, and this time -- mercifully -- it did not result in a death or disabling injury. Nevertheless, it was a very close call. Two motorists were driving past the Gallatin construction site when a Mountain States crane collapsed into the adjoining roadway, dropping the boom of the crane directly onto the men's car and totaling it. Miraculously the driver and his friend escaped without major injuries. Because this equipment failure constituted a risk to workers, OSHA investigated and eventually fined the company for willful and serious violations.⁶ The agency noted that Mountain States had allowed the crane to operate even though the contractor's own crane inspections had already revealed the cable was worn, and replacement cable was already on-site. (Curth, May 2013; OSHA Nov. 2013)

Fatalities on public projects in 2012 and 2013

It is not easy to identify from among the fatalities on the In Memoriam lists for 2012 and 2013 which of them took place on public projects. Sometimes sufficient background information can be gathered to allow a determination, but in other cases this level of detail is unknown. Although the tally below is likely incomplete, it is at least a start toward identifying the workers who were killed while employed by a contractor or sub-contractor on a public project.

Abimael Contreras is one of the bridge workers in the saga described above. He was employed by Gilley Construction, a sub-contractor to Britton Bridge when he was killed on a bridge project at Nickajack Lake in Marion County in March of 2012 (TOSHA inspection on Contreras). Mr. Contreras' personal story appears in this report.

Renardo Jackson, an African American man in his thirties and father of one, was working in 2012 for a contractor in an excavation in a vacant lot in Greenfield, Tennessee. The city intended to turn the lot into a public park. Jackson was buried in ten feet of rubble when the building next to the excavation collapsed. (TOSHA summary fatality description #1; Collins 2012; Wilkerson 2012)

Iran Morales (or perhaps Iran Gallardo) was employed by a contractor to help paint a 30-foot, two-million-gallon water tower for the city of Sparta in July, 2013. He was twenty-four feet off the ground in a two-point suspension scaffolding system when one of the cables holding the scaffold pulled free and he fell, striking his head on the way down. He was taken to the hospital and died several weeks later. TOSHA cited the company for multiple serious violations having to do with the rigging of the scaffold, the lack of a competent person on site to inspect and supervise, the lack of adequate training, and the fact that workers on the scaffold were not equipped with fall arrest protection. (TOSHA Inspection on Iran Morales/Gallardo)

Michael Tallent, whose personal story appears elsewhere in this report, was killed after hiring on with a temp agency and being assigned to W&O Construction to help KUB upgrade its system so as to increase the flow capacity of the utility's Kuwahee Wastewater Treatment Plant. Through an entirely avoidable series of missteps, failures to communicate vital information, and failure to respond appropriately to hand signals, a crane was allowed to come into contact with a live high-voltage wire. Mr. Tallent, a 27-year-old who was still new on the job and untrained

⁶ . Federal OSHA rather than Tennessee OSHA conducted this particular investigation because the crane that collapsed was located on a navigable waterway.

in fundamental skills he needed to have in this dangerous environment, became the path to ground, and was electrocuted. (AP; Ballock; TOSHA Inspection on Tallent)

Michael Wells, was hired by Roberson Construction and Land Development in 2012 to work on a demolition and repair effort that was mounted after the catastrophic failure of a wastewater containment basin owned by the city of Gatlinburg -- a failure that itself had caused the death of two employees. He was cutting rebar in an improperly graded trench when the walls collapsed and he was buried in debris. (Alund Apr. and Oct. 2011; WATE 2012; TOSHA Inspection on Wells) Mr. Wells' personal story is included in this report.

The needless deaths described above show that government agencies at both the state and local level need to do a better job of weeding out unsafe contractors and awarding contracts instead to companies that can demonstrate the capacity and the will to achieve a culture of safety on public works. Because they hold the purse strings on millions of dollars of public funds, agencies like TDOT have far more power than TOSHA to affect contractor behavior and to raise the level of safety on public projects.

One promising step toward safer public contracting took place this spring when the "Public Construction Contractor Safety Act" was introduced in the General Assembly. The proposed act was a bill aimed at requiring state agencies to institute safety-focused prequalification procedures for all public construction contracts worth \$500,000 or more. The bill, H.B. 2018, was sponsored in the House by Rep. Mike Stewart (D-Nashville). The full text of the final version of the bill as amended appears as Appendix B below.

Supporters of the bill knew that the present politics of the General Assembly pose difficulties for passage of legislation aimed at providing more protection for workers, even a measure as sensible as screening for contractor safety. Nevertheless they were hopeful the bill would serve as an opening for further discussion about the cost of construction injuries and deaths, and for educating both the general public and state officials about these problems.

Recently, in exchange for withdrawing H.B. 2018 and H.B. 2017 (another bill addressed to worker safety, Appendix C below), Rep. Stewart secured an agreement from the Department of Labor that its staff would work with him and other interested parties over the summer to explore ways of enhancing safety in public contracting. Advocates see this agreement as a positive result of the legislative initiative, and they look forward to further progress in the year ahead.

Several entities in Tennessee already use prequalification questionnaires and rating systems to guide their contracting practices, so the basic mechanisms of this approach are nothing new. However, in some cases the questions and rating systems fail to emphasize safety in a serious way. In other cases written protocols appear to treat safety more seriously, but bad outcomes suggest there may sometimes be deficiencies at the point of rating, implementation or monitoring of contractors' promised safe practices. All existing systems should be assessed in light of outcomes and in light of experiences and perspectives contributed directly by workers themselves, under conditions that assure protection from retaliation.

Immigrant and Latino Workers

The Latino population has grown rapidly in Tennessee since the 1990s, although Latino residents -- both immigrant and non-immigrant -- are still only 4.8% of the state's total population (U.S. Census). Latino workers experience a disproportionate number of fatalities and serious injuries on the job in Tennessee, and the problem seems to be getting worse instead of better.

This Report's In Memoriam lists for 2012 and 2013 indicate 18 deaths of Latino workers, some 11% of the total fatalities we have been able to identify. (If heart attacks and other sudden illnesses or collapse at work were omitted from the whole, then Latino deaths would jump to 15% of the total.) Statistics from the U.S. Bureau of Labor Statistics likewise show disproportionate deaths among Latinos working in Tennessee.

Table 5. Deaths of Hispanic Workers in Tennessee, 2008-2012

Year	# Fatal Job Injuries to Hispanics	% of All Job Fatalities in Tn
2012	9	9%
2011	9	7.5%
2010	8	5.8%
2009	8	7.2%
2008	9	6.7%

Source: CFOI

Reasons for the disproportionate rate of injury and death suffered by Latino workers -- not only in Tennessee, but across the nation -- are complex. Because Tennessee is a place where Latinos have begun settling in significant numbers only in recent decades, a relatively high proportion of Latinos living in the state are foreign-born. (Pew Research Center 2012) These immigrants are often employed in high-risk sectors like construction, demolition, and agriculture where they are subject to hazards greater and more numerous than the norm.

Further, Latino immigrants -- and especially those who lack legal immigration status -- are particularly vulnerable to mistreatment. Except in the unusual case where undocumented immigrant workers have access to relevant information and are in a position to find competent and ethical people willing to advocate on their behalf, they are unlikely to know or exercise their right to a safe and healthy

workplace, a right that under U.S. law is supposed to be afforded to all who labor, regardless of race, ethnicity or immigration status.

Far too many employers have shown they are willing to take advantage of immigrant workers whose legal status or other matters limit their options and make them fearful of taking action. (Smith and Cho) ***The vulnerability of this sub-class in turn undermines health and safety standards for all workers, reduces the likelihood that dangerous worksites will be reported, makes it more difficult for health and safety inspectors to get accurate information during investigations, and puts conscientious employers at a material disadvantage.***

Existing systems for protection of workers and enforcement of law have not kept pace with the changing nature of the state's workforce. Bi-lingual staffers at enforcement agencies are more the exception than the rule, if they exist at all. Many important forms and educational materials are still not available in languages other than English. In general, far too few outreach strategies are aimed at directly affected workers, but outreach efforts originally designed for use with native-born workers and employers often do an especially poor job of reaching immigrant populations, Latino or otherwise.

A large part of the blame for the creation of an immigrant worker underclass rests with the U.S. Congress. Its failure to pass immigration reform despite widespread acknowledgement that the present system is broken, and despite widespread support for serious reform, leaves many of the underlying problems impossible to address. But other actors share responsibility as well, and other agencies of federal, state and local government have the power to make important improvements in the meantime, as Recommendations below will reflect.



Abimael Contreras

Abimael Contreras tenía 31 años de edad el día que se cayó de un barco al agua fría de 60 pies de hondura del Lago Nickajack en el condado de Marion, arrastrado a la muerte por el peso de las herramientas que llevaba en su cintura. Este incidente que ocurrió en marzo de 2012 incrementó a cuatro el número de personas que se han muerto en proyectos de construcción de puentes auspiciados con fondos del Departamento de Transporte de Tennessee (TDOT) y dirigidos por el contratista Britton Bridge LLC, y en los cuatro casos se ha determinado que Britton Bridge LLC fue responsable de serias violaciones de seguridad que contribuyeron a la pérdida de estas vidas.

Abimael proviene del pueblo San Andrés Tlalamac del municipio Atlautla, México, donde todavía radican su padre enviudado y varios hermanos. Abimael vino a los Estados Unidos cuando tenía 19 años. Durante todos estos años siempre mantuvo relaciones estrechas con miembros de su familia, tanto en México como a este lado de la frontera, y consideraba a Tennessee como su hogar.

Toda su vida Abimael era una persona que tenía muchos amigos, era muy amigable, y muchas personas se encariñaron de él. Sus hermanas, que viven y trabajan en Tennessee y que lo veían a menudo, tan entrelazados que eran en la vida cotidiana, relataron que los dos días del velorio su familia de nacimiento y la familia de su esposa recibieron tantas personas que no cabían en el lugar. Esas incluían sus amigos, los jugadores de su querido equipo de fútbol, y los trabajadores con quienes había compartido una década trabajando en puentes y otros proyectos de construcción. Muchos eran amigos de la comunidad de inmigrantes latinos que vivían cerca de su casa, pero varios eran amigos nacidos aquí en los Estados Unidos. Abimael se llevaba bien con todos y tenía amistades de las dos comunidades.

Aunque no tenía hijos propios, Abimael fue un hombre atento a los niños y se dedicó a ayudar en la crianza de los hijos de su esposa y de sus hermanas. Su familia en Tennessee lo echa de menos tanto. Y su familia en México, devastados, por haber perdido a un hijo y hermano que no había podido regresar a visitarlos desde que salió de su pueblo natal.

Algo que le causa mucho dolor a sus hermanas es pensar que la muerte de Abimael ocurrió cuando solo le faltaban unos meses para realizar su sueño de dejar de trabajar en construcción y comenzar su propio negocio. Por años estuvo ahorrando y acumulando la maquinaria necesaria para comenzar un negocio de cortar el pasto y mantener las yardas. Sus hermanas ya tenían muchos años de estar preocupadas por el trabajo pesado de su hermano y las diferentes maneras en que el empleador no trataba bien a sus trabajadores. Ellas esperaban ansiosamente ese momento cuando Abimael iba a poder salir de todo eso y comenzar a crear un futuro nuevo para él y para su familia.

Abimael Contreras

Abimael Contreras was thirty-one years old on the day he slipped from a barge into 60 feet of frigid water in Nickajack Lake in Marion County and was dragged to his death by a heavy tool belt. This incident in March of 2012 brought to four the number of men killed on TDOT bridge projects where the contractor Britton Bridge LLC was found responsible for serious safety violations related to the loss of life.

Originally from a small town called San Andres Tlalamac in Atlautla, Mexico where his widowed father and several siblings still live, Abimael came to the United States while still a teenager. In the years since his arrival, he stayed in close touch with family members on both sides of the border, but he had made Tennessee very thoroughly his home.

All his life Abimael was a person who made friends easily, and other people were often drawn to him. His sisters -- who live and work in Tennessee and whose lives were closely laced with his -- describe how many people came to the funeral home on the two days when a circle of birth family and family-by-marriage received friends there. They say there was not room for all those who came to pay respects, including friends, fellow players from his beloved soccer team, and co-workers from the decade he had spent as part of a construction crew on bridges and other jobs. Many were members of the Latino immigrant community near his home, and many others were native-born friends. Abimael was equally comfortable and connected in both communities.

Although he did not yet have biological children of his own, Abimael was a man who paid attention to children, and he helped care for his sister's child and was a devoted stepfather to his wife's children. He will be sorely missed by this Tennessee family he left behind. His Mexican relatives are also devastated to lose the son and brother they had not seen since he left home in his teens.

Something that causes his sisters special pain when they think about Abimael's untimely death is the fact that he had come within a few months of achieving a long-held dream. He planned to leave his employer and go into business on his own. For years he had been saving and planning for the day he would open his own lawn-care business. His sisters had long worried about his job requiring such heavy work and about various ways they felt his employer did not treat its workers fairly. They were looking forward to his getting out from under all that and beginning to build his and his family's future more on his own terms.

Enforcement: Making The Rules Real

One complaint often leveled about our current system is that federal OSHA's process for adopting new standards is far too sluggish, with standards facing a gauntlet of barriers that cost lives and retard progress in the development of safer alternatives and better design. Critics charge that many protective standards demonstrably needed to protect worker health and safety have been blocked by unjustified industry resistance.

Examples include the failure to achieve an ergonomics standard despite an epidemic of repetitive motion injuries, the length of time it has taken to bring a serious silica standard even close to adoption, the lack of a combustible dust standard despite numerous fatalities from dust explosions (including several in Tennessee described in last year's report), and the continued absence of a standard that would at least require all covered employers to take the simple but crucial step of adopting an injury and illness prevention plan. These are serious problems in need of prompt remedy as some Recommendations below reflect.

But good rules, even when achieved, are only as good as the accompanying system for their enforcement. Today weaknesses in the enforcement of existing occupational safety and health standards are a serious problem in Tennessee and across the country.

One enforcement issue is a bare question of resources. There simply are not enough health and safety inspectors, trainers, interpreters, and other support staff in the present system at a national or state level to do the work that relevant agencies are supposed to carry out. For instance, the American Federation of Labor-Congress of Industrial Organizations (AFL-CIO) estimates that it would take TOSHA's inspectors 69 years to inspect all the workplaces that are supposed to be within that agency's jurisdiction. Further, more than a few states in the country are worse off than that (AFL-CIO, 2013).

In the absence of sufficient resources to carry out regular inspections of all covered workplaces, the system as it now exists relies heavily on worker complaints to identify workplaces where official attention is needed. But workers themselves are often unaware of their rights to a safe and healthful workplace, or if they are aware, they are deterred from exercising these rights by the fear they will suffer retaliation if they speak up.

Workers have good reason to fear retaliation. Though the law declares such retaliation to be illegal, this declaration has few teeth under the current system. In an economy still struggling back from serious recession, many workers are understandably fearful of antagonizing an employer.

Fear can loom even larger for the immigrant laborers in some of our state's most dangerous jobs. Developing a system that provides real support and protection to workers who step forward with complaints or who refuse to work in dangerous conditions will require determined action at a federal and state level.

Even when workers do complain, even when inspections do take place, and when hazards are brought to light, the typical penalties imposed by federal OSHA and by state-plan agencies like TOSHA for violations of health and safety standards are too low to effectively deter employers from maintaining unsafe working conditions. In fiscal year 2012, for a "serious" violation -- that is, a violation that presents the potential for serious bodily harm to an employee -- TOSHA initially assessed an average fine of just \$1,497. (FAME Report, 2012)

Further, initial penalties are not the full story in the world of occupational safety and health enforcement. In practice, the initial citation issued and the initial penalty assessed function more like an opening offer in a negotiation process than like a final judgment. If an employer appeals -- and some appear to appeal routinely, as a matter of course -- it stands an excellent chance, through that simple act, of being able to negotiate down the dollar amount of the penalty, as well as the "level" of the citation. (Citations are designated as serious, willful, repeat, or other-than-serious.)

To its credit, during the negotiation process TOSHA holds onto a better-than-average proportion of the initial penalties it assesses. It achieved a "retention rate" of 84.9% in fiscal year 2012, a rate that federal OSHA commended as a high percentage. TOSHA's good record on retention operates as a counterbalance to its initial penalty levels which are low relative to the national average, and also to the relatively low proportion of citations it initially designates as serious or willful (FAME Report, 2012).

But the larger truth is, from start to finish and across the country, the penalty amounts in play are paltry. Whether one compares the money a contractor can save by cutting corners on safety to TOSHA's average initial penalty of \$1497, to 84.9% of \$1497, or to federal OSHA's average levels at the initial and final stages, the penalties simply do not measure up to the scale of harms the system is supposed to be addressing. Workers' lives are counted cheap in comparison to other economic and political priorities. The potential and actual costs to workers, families and communities versus the penalties imposed on employers are seriously out of alignment.

The federal Occupational Safety and Health Act, echoed by Tennessee state law, limits maximum fines to \$7,000 for a given citation, a limit that is long overdue for an update. So legislative action is in order. But even without a statutory lifting of the limit, federal and state-plan OSHA agencies can do more. In recent years, for instance, federal OSHA has made a serious effort to impose stiffer penalties for serious violations, and its efforts have made a measurable difference, as reflected in the numbers below. Also reflected, however, is the fact that penalties in state plan states -- of which our own TOSHA is one -- are not keeping pace.

Table 4. Average Penalties for Serious Violations

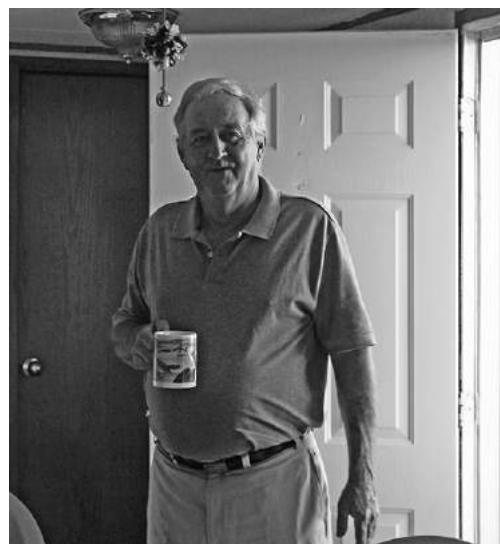
Year	Federal States	State-Plan States
FY 2012	\$2,156	\$974
FY 2011	\$2107	\$942
FY 2010	\$1052	\$858
FY 2009	\$965	\$781
FY 2008	\$960	\$872

Source: AFL-CIO, Death on the Job: The Toll of Neglect (2013)

Michael Wells

On Feb. 23, 2012, Michael Wells was working on a demolition crew at the Gatlinburg Wastewater Treatment Plant. The crew was removing the remains of a huge concrete containment basin that had collapsed catastrophically in April, 2011, killing two workers. Michael was cutting rebar in a trench when the earthen walls of the trench gave way. He was struck and killed by falling debris as the trench collapsed on him. He was 57 years old.

Michael was a native of Asheville, N. C. and spent his entire life there. He was a loving family man. Marjorie, his wife, has two daughters, Cynthia and Rebecca, by a previous marriage. They were the apple of Michael's eye and he always referred to them as "his daughters." As a young man Michael had served in the U. S. Navy. He was an active member of Riverside Baptist Church in Asheville. Marjorie said that Michael equally loved fishing and gospel music. Michael and Marjorie loved to travel about Western Carolina attending auctions.



Marjorie described her husband as a generous, giving man. He had willed his body to a medical school in the hope that he could help others through medical research.

Given the distance between Asheville and Gatlinburg, Michael stayed overnight in Gatlinburg during the work week. The weeks before the accident had been stressful ones in which Marjorie had undergone surgery and been hospitalized. She had been released from the hospital in time for the couple to spend the weekend before the accident at home together. On Monday, while family stayed with Marjorie, Michael returned to work in Gatlinburg. On Thursday morning, before he left for work, Michael called home to wish Marjorie a beautiful day and to tell her he loved her. It was the last time she would hear her husband's voice.

TOSHA investigators charged Michael's employer, Roberson Construction and Land Development, Inc., of Enka, N. C., with three serious safety violations, including failure to provide a protective system to safeguard against collapse of the trench walls. The company was fined a total of \$7,200.

Recommendations

Federal Level

Congress should:

1. Strengthen and update OSHA. Congress should adopt a broad set of reforms like those set out in the Protecting America's Workers Act (currently H.R. 1648 in the U.S. House of Representatives). That bill would remedy a number of known weaknesses in the OSHA Act as it exists today. Measures should include: substantial additional resources for both education and enforcement; an increase in maximum penalties; greater protection of the rights of victims and potential victims; and enhanced protection from retaliation for workers who speak out about dangerous conditions or who refuse unsafe work.

2. Enact immigration reform. Congress should pass a comprehensive reform package that includes not only a broad path to citizenship, but also features strong on-going immigration-related protections for immigrant workers who blow the whistle on workplace hazards to health and safety. Provisions of the proposed Protecting America's Workers from Exploitation and Retaliation Act (POWER Act), already included in the immigration reform bill passed last year by the U.S. Senate, provide an excellent map for the kinds of protections needed.

OSHA should:

1. Proceed promptly to issue a new and stronger silica standard. Thousands of workers in construction and other industries in Tennessee and across the country are exposed every year to airborne crystalline silica. Those who die from silicosis and other silica-related lung conditions do not show up in the In Memoriam list in this report because they are not captured in the data sets and other sources from which the list was built, but there is no doubt such deaths are occurring annually. A stronger silica standard is long overdue.

2. Improve methods for protecting workers from retaliation and require state plans to do the same. Workers need to have confidence that they can speak up about dangerous and unhealthful conditions, can refuse work that poses an immediate and serious hazard, and can communicate confidentially with investigators without fear of adverse consequences. Present systems do not establish that confidence.

3. Develop more effective ways to communicate to immigrant workers and their employers that all workers in the United States, regardless of immigration status, have a right to a safe and healthful work place. Federal OSHA should continue and extend its current efforts to reach out to immigrant workers and also to maintain a clear separation between labor-standards enforcement and enforcement of immigration law. If lawmakers in a state-plan state like Tennessee decide to lodge immigration enforcement duties within the same departments or agencies that are tasked with enforcing the state's labor standards, then federal OSHA should make sure the state also establishes and maintains a clear separation of functions, so that enforcement of OSHA standards and the prevention of workplace injury and death for all workers is not compromised.

The President should:

1. Issue an executive order on safety in federal construction contracting.

Procurement on federal construction contracts should make use of prequalification questionnaires and rating systems that weed out unsafe contractors and properly credit those with the demonstrated capacity and commitment to achieve a culture of safety on federal projects.

2. Extend temporary administrative relief from deportation to a broad segment of immigrant workers, especially those who speak up about health and safety on the job.

The shadow cast over many workplaces by the threat of deportation allows unsafe and unhealthy practices to flourish. In the absence of needed Congressional action on immigration reform, the President should extend relief to a much broader group of workers, with a special emphasis on protection of immigrant worker whistleblowers who come forward with information about hazards to health and safety in workplaces.

State Level

The Governor should:

1. Require Worker Safety Action Plans. The Governor should ask each relevant department, in consultation with the Tennessee Department of Labor and Workforce Development, to prepare a Worker Safety Action Plan focused on concrete steps to dramatically reduce occupational fatalities and serious injuries to workers employed by them or by contractors doing their work. In the case of departments that contract for construction of public buildings and other infrastructure, such plans should include the use of prequalification questionnaires and rating systems to screen and select contractors. The Governor should monitor implementation of these plans, report results to the public, and make necessary adjustments to assure they are effective and efficient.

2. Seek adequate funding. Those elements of the Executive Branch that are charged with protecting the safety and health of Tennessee workers, especially the Tennessee Occupational Safety & Health Administration (TOSHA), need adequate funds to carry out their mandates, and the Governor should make it a priority to secure adequate funding for this life-saving work.

3. Reach out to the private sector. Many avoidable deaths and serious injuries happen every year in the private sector. The Governor should reach out to employers in the private sector to seek a similar commitment from them to achieving a culture of health and safety on privately financed projects and in private-sector workplaces.

The General Assembly should:

1. Act to reduce the costs of construction deaths and injuries. The first and heaviest costs of construction injuries are borne, of course, by those killed or injured, and by their survivors. Legislators surely owe Tennesseans an awareness of these personal costs, and a serious effort to prevent further occurrences in the future. But construction injuries also impose costs on the general population, taxpayers, and government itself. As reflected in Appendix A, researchers at Public Citizen recently estimated that during the years 2010-2012, fatal and non-fatal injuries to Tennessee construction workers imposed a cost on the Tennessee economy of \$540 million. The General Assembly should enact reforms to the system that require companies to internalize a greater percentage of these costs and create greater incentives for designing more efficient and effective ways of reducing worker injury and death.

2. Increase funding for TOSHA. For TOSHA to effectively carry out its educational and enforcement missions, it needs more resources. In particular, more educators and more inspectors -- including more of them fluent in both English and Spanish -- are badly needed.

3. Enact a Safety in Public Contracting law to better assure worker safety on state construction projects. In its next session the General Assembly should pass a measure similar to last session's H.B. 2018, the "Public Construction Contractor Safety Act." (See Appendix B) Local governments and state agencies should be required to screen bidders on major public works projects so that unsafe contractors can be weeded out, and bidders with a strong safety record and present safety capacity can receive appropriate credit.

4. End the conflict it has created between labor standards enforcement and immigration enforcement. The Tennessee Department of Labor & Workforce Development has been tasked by the Tennessee General Assembly with conflicting duties. On the one hand, the Department is responsible for enforcing important worker protections that should and do apply to all workers regardless of immigration status. On the other hand, it is also supposed to enforce workplace-linked immigration rules like mandatory e-verify. The legislature should act to minimize this conflict by requiring the Department of Labor and Workforce Development to establish and maintain a clear separation between its enforcement of labor standards and its enforcement of immigration-related rules.

5. Change the rule that now gives an automatic extension to employers who appeal after being cited by TOSHA for serious, willful or repeat violations. Presently, any employer who decides to appeal a TOSHA citation, even if that citation is for a serious, willful or repeat violation, receives an automatic extension on the deadline it initially receives from TOSHA to do something about the hazard cited. That is, from the moment an appeal is filed, the employer has no legal obligation to fix the problem until the end of the whole, sometimes quite lengthy, appeal process. The General Assembly should pass a measure similar to last session's H.B. 2017, requiring that an employer who wants an extension during an appeal must show that it has a good chance of winning the appeal and that the added delay is not likely to affect the health and safety of workers on the job. (See Appendix C)

TOSHA should:

1. Increase the average dollar amount of penalties and the average seriousness level of citations while maintaining the agency's strong retention rate. Present penalties are failing to deter many employers from exposing their workers to hazards on the job. Deterrence is only one part of TOSHA's mandate, but it is an important one, and the agency has plenty of room within existing law to impose more significant consequences for serious, willful and repeat violations. The agency is to be commended for its better-than-average retention rate, and it should maintain that good record as it raises the initial dollar amount of penalties and the initial seriousness level of citations.

2. Improve methods for protecting worker complainants and worker witnesses from intimidation and retaliation. Workers need to have confidence that they can speak up about dangerous and unhealthful conditions, can refuse work that poses an immediate and serious hazard, and can communicate confidentially with investigators without fear of adverse consequences. Present systems do not establish that confidence.

3. Launch a sustained initiative to address the disproportionate number of injuries and deaths experienced by Latino workers in Tennessee. Tennessee is not alone in facing the challenges associated with these disparities. Until Congress acts to fix the broken immigration system, some persistent problems beyond state or local control will remain. But state agencies like TOSHA have a responsibility to do better, and many of them have a long way to go in adjusting traditional assumptions and practices to fit new realities. The hiring of more bi-lingual staff should be a significant priority, along with training of investigators about special concerns and special measures they should bear in mind when investigating the kinds of low-wage immigrant-heavy workplaces that may pose the most serious challenges for getting at the truth about workplace hazards and protecting the vulnerable. TOSHA should also work with others in the Tennessee Department of Labor and Workforce Development to assure that a clear separation between labor-standards enforcement and immigration enforcement within the Department and its various divisions is established and maintained.

TDOT should:

1. Revise its prequalification system to give worker safety more weight in the process of selecting contractors for TDOT projects. The Department should revise its existing prequalification questionnaire and rating system in a manner that allows it to assess prospective bidders' past safety performance as well their present capacity and commitment to worker safety, using indicators related to the quality of factors such as site-specific safety planning, management commitment, employee participation, safety training, record-keeping, and evaluation of supervisory personnel.

2. Undertake a study of why Tennessee ranks so poorly among other U.S. jurisdictions in the number of worker deaths that occur in highway work zones. The Centers for Disease Control and Prevention report that from 2003-2012, Tennessee had the fifth highest number of worker deaths in highway work zones of all states in the country. This needs to be better understood.

3. Set up channels of communication that encourage workers to come forward with information about hazardous conditions on TDOT projects. Workers on a job

often have invaluable information unavailable from any other source about actual day-to-day practices on a given project and about the reality of commitments made by contractors or sub-contractors on paper. TDOT should create a clear path for workers to communicate directly with the Department if they have concerns about worker safety that they have not been able to resolve successfully at another level. As a first step, TDOT should agree to meet with striking workers from the Henley Street Bridge project who have been attempting to gain an audience with agency leaders for more than a year.

4. Monitor for safety. TDOT should assert a more effective degree of direct monitoring and control over safety practices on all its projects, and it should heighten the level of monitoring and control in cases where serious unsafe practices have already been exposed. Extraction of paper promises from contractors in such a case is not a sufficient response.

Local Level

Municipalities and other agencies of local government should:

Develop contracting policies that reward responsible contractors. Local municipalities and other governmental entities such as utility boards and school boards should adopt prequalification questionnaires and rating systems that weed out unsafe contractors and properly credit those that demonstrate capacity and commitment to achieve a culture of safety on public projects. Contractors with strong hazard-prevention practices and strong safety training are often the same ones that benefit their immediate workforce and the local economy more broadly, by paying decent wages and benefits and providing apprenticeship programs that create the opportunity for long-term career stability and progression across the course of a person's work life. Investments in public infrastructure built by employers like this deliver triple rewards: workers protected from illness and injury, a well-trained workforce, a well-built infrastructure, and a strengthened local economy.

At the Workplace

All employers should:

Develop comprehensive injury and illness prevention programs. Several U.S. states require that certain employers, particularly those in hazardous industries, develop comprehensive programs to identify hazards in the workplace and develop plans to reduce or eliminate these hazards. This practice has proven effective in reducing job injury and illness rates and should be adopted voluntarily by all employers.

References

- AFL-CIO (2013). *Death on the Job: The Toll of Neglect*, 22nd Edition, <http://www.aflcio.org/content/download/79181/1933131/DOTJ2013.pdf>.
- Alund, Natalie Neysa (Oct. 2011), Deficient wall construction cited in fatal Gatlinburg Wastewater Treatment Plant collapse, <http://www.knoxnews.com/news/2011/oct/27/deficient-wall-construction-cited-in-gatlinburg/>
- Alund, Natalie Neysa (Apr. 2011) “Two die when wall falls at Gatlinburg sewage treatment plant: Raw waste released into Little Pigeon River, Knoxville News Sentinel, <http://www.knoxnews.com/news/2011/apr/05/two-die-when-wall-falls-gatlinburg-sewage-treatmen>
- Alund, Natalie Neysa. (2012). Contractor reaches settlement in Henley Bridge fatality, Knoxville News Sentinel, <http://m.knoxnews.com/news/2012/jan/10/contractor-reaches-settlement-in-henley-bridge/>
- AP (January, 2013) “KUB contract worker who died Tuesday identified,” <http://www.local8now.com/news/headlines/KUB-contract-worker-who-died-Tuesday-identified-185422122.html>.
- Ballock, J. (2013). “Probe into electric shock death could take weeks,” Knoxville News-Sentinel. [Article referencing W & O Construction safety record. January 3. <http://www.knoxnews.com/news/2013/jan/03/tosha-probe-into-electric-shock-death-could-take/>
- Centers for Disease Control and Prevention. Highway Work Zone Safety, <http://www.cdc.gov/niosh/topics/highwayworkzones/>
- CFOI. Census of Fatal Occupational Injuries. <http://www.bls.gov/iif/oshcfoi1.htm>
- Collins, Julie. (2012) Building Collapses in Greenfield, Tennessee, One Dead, WPDS, Paducah, KY, Jan. 23, <http://www.wpsdlocal6.com/news/local/Building-collapses-in-Greenfield-Tenn-137898548.html>
- Curth, Kimberly (2013). Company in Gallatin Crane Collapse Has History of Accidents, WSMV.com, May 22. <http://www.wsmv.com/story/22400808/company-in-gallatin-crane-collapse-has-history-of-accidents>
- Day, Liz (2012). Anatomy of a Cell Tower Death, <http://www.propublica.org/article/anatomy-of-a-cell-tower-death>.
- Harris, Megan (Nov. 13, 2010). “Memphis police identify construction worker who fell at Wolf River bridge,” Memphis

Commercial Appeal, Saturday, Nov. 13, 2010, <http://www.commercialappeal.com/news/2010/nov/13/police-identify-construction-worker-who-fell-wolf/>.

Hickman, Hayes and Don Jacobs (Jan. 25, 2011). Contractor praises killed worker as professional, 'charming', Knoxville News-Sentinel, www.knoxnews.com/news/2011/jan/25/henley-bridge-worker-seriously-injured/.

Hickman, Hayes and Don Jacobs (Jan. 26, 2011). Worker's death probed: Henley Bridge renovation foreman suffered head injury, Knoxville News Sentinel, <http://www.knoxnews.com/news/2011/jan/26/workers-death-probed-henley-bridge-renovation-fore/>.

Hickman, Hayes and Don Jacobs (May 26, 2011). TDOT halts Henley Bridge work after death: Agency to review contractor's safety standards statewide, Knoxville News Sentinel, <http://www.knoxnews.com/news/2011/may/26/tdot-halts-henley-work-after-death/>.

Jacobs, Don (Feb. 4, 2013). Henley Bridge opening delayed to February 2014; piers work another \$6 million, Knoxville News-Sentinel, <http://www.knoxnews.com/news/2013/feb/04/henley-bridge-opening-delayed-february-2014-piers/>.

Jacobs, Don (Mar. 28, 2012). Worker dies at Britton Bridge project in Marion County, Knoxville News-Sentinel, <http://www.knoxnews.com/news/2012/mar/28/worker-dies-at-britton-bridge-project-in-marion/>.

Kales, Stefanos N., M.D., M.P.H., Elpidoforos S. Soteriades, M.D., Sc.D., Costas A. Christophi, Ph.D., and David C. Christiani, M.D., M.P.H. (2007). Emergency Duties and Deaths from Heart Disease among Firefighters in the United States, *N Engl J Med* 2007; 356:1207-1215, March 22, 2007.

Kalor, Greg, (Mar. 10, 2013). Contractor fined in workers' deaths, Cleveland Daily Banner, http://www.clevelandbanner.com/view/full_story/21932517/article-Wacker-contractor-fined-in-workers%E2%80%99-deaths?instance=most_popular.

Knox Area Workers Memorial Day Committee and Graduate Students in Public Health, East Tennessee State University (2013). Tennessee Workers: Dying for a Job, http://www.jwjet.org/Dying_for_a_Job.html

Knutson, Ryan and Liz Day (2012). In Race For Better Cell Service, Men Who Climb Towers Pay With Their Lives, <http://www.propublica.org/article/cell-tower-fatalities>

Leigh, J. Paul (2011). Economic Burden of Occupational Injury and Illness in the United States. *Milbank Quarterly*, 2011. 89(4): p. 728-772.

Magacs, Hilary (2012). Sheriff's Office Identifies Cable Worker Killed in North Knoxville, Local8Now.com, July 24

Miles, Jason (2012). Douglass Community Meets with PennAKem Officials Two Weeks After Explosion <http://www.wmctv.com/story/19779275/douglass-community-meets-with-pennakem-officials-two-weeks-after-explosion>

MSHA, Report of Investigation, Underground Coal Mine, Fatal Fall of Roof or Back September 26, 2012, <http://www.msha.gov/FATALS/2012/FTL12c16.asp#.U1AOQsesg7A>.

OSHA (Nov. 2013). US Department of Labor's OSHA cites Tennessee contractor following crane collapse on Highway 109 in Gallatin, Tenn. https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=NEWS_RELEASES&p_id=25062

OSHA (2014). National Safety Stand-Down to Prevent Falls in Construction, June 2-6, 2014. <https://www.osha.gov/StopFallsStandDown/index.html>

OSHA. Trenching and excavation, <https://www.osha.gov/SLTC/etools/construction/trenching/mainpage.html>

Pew Research Center (2012). Demographic Profile of Hispanics in Tennessee, 2011 (listing Tennessee as having the eighth highest proportion of foreign-born Latinos in the United States), <http://www.pewhispanic.org/states/state/tn/>

Sieber, W.K.; C.F. Robinson, J. Birdsey, G.X. Chen, E.M. Hitchcock, J.E. Lincoln, A. Nakata, and M.H. Sweeney (2014). Obesity and other risk factors: The National Survey of U.S. Long-Haul Truck Driver Health and Injury. *Am. J. Ind. Med.* doi: 10.1002/ajim.22293, <http://onlinelibrary.wiley.com/doi/10.1002/ajim.22293/abstract>

Smith, Rebecca and Eunice Hyunhye Cho (2013). Worker Rights on Ice: How Immigration Reform Can Stop Retaliation and Advance Labor Rights, <http://www.nelp.org/page/-/Justice/2013/Workers-Rights-on-ICE-Retaliation-Report.pdf?nocdn=1>

Tennessee Dept of Labor & Workforce Development, Labor Research & Statistics Division, in Cooperation with the U.S. Department of labor Bureau of Labor Statistics (2013). 2012 Tennessee Census of Fatal Occupational Injuries and The Occupational Injuries and Illnesses Survey. <http://www.tn.gov/labor-wfd/Publications/EmploymentSecurity/2012CensusBooklet.pdf>

Tony Mazzocchi Center, New Perspectives Consulting Group, and United Steelworkers (2013). A Risk Too Great: Hydrofluoric Acid in U.S. Refineries, <http://assets.usw.org/resources/hse/pdf/A-Risk-Too-Great.pdf>.

TOSHA 2012 summary fatality descriptions #1, #9, #20, # 26, and #31, http://www.tn.gov/labor-wfd/tosha/tosha_invest_2012.shtml

TOSHA Inspection # 309-634-178 (Mario Perez)

TOSHA Inspection # 315-202-093 (René Mendez)

TOSHA Inspection # 315-366-112 (John Womac)

TOSHA Inspection # 315-685-552 (Solín Estrada-Jimenez)

TOSHA Inspection # 316-432-681 (Michael Wells)

TOSHA Inspections # 316-483-676 and # 316-483-965 (Abimael Contreras)

TOSHA Inspection # 316-911-478 (Michael Tallent)

TOSHA Inspection # 317-156-131 (Rick Beck)

TOSHA Inspection # 137-146-124, -132, -137, and -140 (Joel Pineda and Jose Velasco)

TOSHA Inspection # 317-276-582 (Iran Morales)

TOSHA (2009). TOSHA Field Operations Manual: Imminent Danger, Fatality, Catastrophe, and Emergency Response. (Nashville: State of Tennessee Department of Labor and Workforce Development, Division of Occupational Safety and

Health)

TOSHA (2012). Enforcement Procedures for Investigating or Inspecting Workplace Violence Incidents; Tennessee Occupational Safety and Health Administration Instruction, CPL-TN 02-01-052, 4 April 2012.

U.S. Census. State and County Quick Facts: Tennessee. <http://quickfacts.census.gov/qfd/states/47000.html>

WATE (2012). N.C. Man Identified as Victim of Trench Collapse at Gatlinburg Plant. Feb. 26, <http://www.wate.com/story/17034758/nc-man-identified-as-victim-of-trench-collapse-at-gatlinburg-plant>

Wilkerson, Daniel (2012) Family Speaks after Building Collapse, WBBJ Television, Jackson, Tennessee, Jan 24. <http://www.wbbjtv.com/news/local/Family-Speaks-after-Building-Collapse--138019673.html>

Wrightson, Keith (2014). Letter to Representative Mike Stewart, Feb. 28.

Additional resources

Organizations

American Federation of Labor-Congress of Industrial Organizations (AFL-CIO)
<http://www.afcio.org/Issues/Job-Safety>

Asbestos Disease Awareness Organization
<http://www.asbestosdiseaseawareness.org>

Centers for Disease Control & Prevention, Highway Work Zone Safety.
<http://www.cdc.gov/niosh/topics/highwayworkzones/>

Hubble Foundation (support for families of cell tower climbers)
<http://www.hubblefoundation.org/>

Mine Safety and Health Administration (MSHA)
<http://www.msha.gov/>

National Council for Occupational Safety and Health (National COSH)
<http://www.coshnetwork.org/>

National Institute for Occupational Safety and Health (NIOSH)
<http://www.cdc.gov/niosh/about.html>

Officer Down Memorial Page
<http://apps.usfa.fema.gov/firefighter-fatalities/>

Stop Construction Falls Campaign Main Page
<http://stopconstructionfalls.com/>

Stop Construction Falls Fatality Mapping Project
http://stopconstructionfalls.com/?page_id=1239

United Support and Memorial for Workplace Fatalities (USMWF)
<http://usmwf.org>

U.S. Fire Administration, Firefighter Fatalities
<http://apps.usfa.fema.gov/firefighter-fatalities/>

Selected Hazard Information

NIOSH. Fall Injuries Prevention
<http://www.cdc.gov/niosh/topics/falls/>

NIOSH. Firefighter Fatality Investigation and Prevention Program
<http://www.cdc.gov/niosh/fire/>

NIOSH. Highway Work Zone Safety
<http://www.cdc.gov/niosh/topics/highwayworkzones/>

NIOSH. Trenching and excavation
<http://www.cdc.gov/niosh/topics/trenching/>

NIOSH. Women's Safety and Health Issues at Work
<http://www.cdc.gov/niosh/topics/women/>

OSHA. Communication Towers
<https://www.osha.gov/doc/topics/communicationtower/index.html>

OSHA. Electrical Incidents
https://www.osha.gov/SLTC/etools/construction/electrical_incidents/mainpage.html

OSHA. Falls
<https://www.osha.gov/SLTC/etools/construction/falls/mainpage.html>

OSHA. Struck-by hazards (includes vehicles, falling objects, masonry walls)
<https://www.osha.gov/SLTC/etools/construction/struckby/mainpage.html>

OSHA. Trenching and excavation

<https://www.osha.gov/SLTC/etools/construction/trenching/mainpage.html>

OSHA. Workplace violence

<https://www.osha.gov/SLTC/workplaceviolence/>

https://www.osha.gov/OshDoc/Directive_pdf/CPL_02-01-052.pdf

TOSHA. Fall Protection Brochure

http://www.tn.gov/labor-wfd/Publications/TOSHA/TOSHA_Falls.pdf

Glossary of Acronyms and Other Terms

AFL-CIO - American Federation of Labor-Congress of Industrial Organizations

American Federation of Labor-Congress of Industrial Organizations (AFL-CIO)

-- An umbrella federation that brings together a large number of U.S. labor unions, and partners with worker centers and other allied organizations. Its 56 affiliated member unions represent some 12.5 million working men and women.

BLS -- Bureau of Labor Statistics

Bureau of Labor Statistics (BLS) -- The principal fact-finding agency for the U.S. federal government in the broad field of labor economics and statistics.

Census of Fatal Occupational Injuries (CFOI) -- A program that produces counts of fatal work injuries. CFOI is a Federal-State cooperative program, organized by the U.S. Bureau of Labor Statistics and implemented in all 50 States and the District of Columbia since 1992. The census uses multiple sources to identify, verify, and profile fatal worker injuries across the United States.

CFOI -- Census of Fatal Occupational Injuries

Mine Safety and Health Administration (MSHA) -- The purpose of the Mine Safety and Health Administration is to prevent death, disease, and injury from mining and to promote safe and healthful workplaces for the Nation's miners. MSHA conducts regular inspections, fatality and injury investigations, develops standards, and conducts education.

MSHA -- Mine Safety and Health Administration

National Institute for Occupational Safety and Health (NIOSH) -- NIOSH is housed within the Centers for Disease Control and Prevention. It conducts research and training and makes recommendations for the prevention of work-related illnesses and injuries, working with others in government, industry, labor, professional associations, academia and the media to communicate findings on workplace risks and promote prevention measures.

NIOSH -- National Institute for Occupational Safety and Health

Occupational Safety and Health Administration (OSHA) -- The federal agency charged with enforcing federal health and safety laws and mandating better practices in the workplace. OSHA was created by the Occupational Safety and Health Act in the 1970s. That federal statute gave states the option of having federal OSHA administer their occupational health and safety programs or creating their own “state plan,” as long as the state plans standards and procedures are equal to or stronger than federal ones. About half the states, including Tennessee, have chosen to adopt state plans.

OSHA -- federal Occupational Safety and Health Administration

OSHAct -- federal Occupational Safety and Health Act

TDOT -- Tennessee Department of Transportation

Tennessee Department of Labor and Workforce Development -- A department of state government that has responsibility for a range of workplace issues and programs, including unemployment insurance, workers’ compensation, employment services, and occupational health and safety.

Tennessee Department of Transportation (TDOT) -- A department of state government that has responsibility for the construction and maintenance of highways and bridges across the state, and for selection and oversight of companies that receive millions of dollars in highway and bridge construction contracts each year.

Tennessee Occupational Health and Safety Administration -- TOSHA is a “state plan” created by the Tennessee General Assembly under the part of the federal OSHAct that gives states the option to enforce health and safety standards, as long as they are equal to or stronger than federal OSHA’s. It is part of the Tennessee Department of Labor and Workforce Development.

TOSHA - Tennessee Occupational Safety and Health Administration

Appendices

- A. Letter from Public Citizen estimating the cost of construction injuries to the Tennessee economy (Keith Wrightson to Rep. Mike Stewart, Feb. 28, 2014)

- B. Proposed legislation for safety in public contracting (H.B.2018 amended)

- C. Proposed legislation for abating hazards pending appeal (H.B.2017 amended)



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February 28, 2014

Representative Mike Stewart
301 6th Avenue North
Suite 24 Legislative Plaza
Nashville, TN 37243
Phone: (615) 741-2184

Dear Representative Stewart,

During the years 2010-2012, 66 Tennessee construction industry workers lost their lives on the job. In the same years, 10,000 were injured on the job. 5,200 of these injuries were considered serious and the result of these injuries caused construction workers to miss more than one day of work. These fatal and nonfatal injuries imposed an estimated cost of \$540 million on Tennessee's economy.

Construction Worker Fatalities in Tennessee

In 2010, there were 138 fatal work injuries in Tennessee. Thirty of these workers were employed in the construction industry, representing 22 percent of the state's workplace deaths.¹

In 2011, there were 120 fatal work injuries in Tennessee. Eighteen of these workers were employed in the construction industry, representing 15 percent of the state's workplace deaths.²

In 2012, there were 100 fatal work injuries in Tennessee. Eighteen of these workers were employed in the construction industry, representing 18 percent of the state's workplace deaths.³

Thus, during 2010-2012, 66 Tennessee construction workers lost their lives on the job, representing 18 percent of the state's workplace fatalities.

¹ Fatal occupational injuries by selected worker characteristics and selected industry, Tennessee, private industry, 2010, U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, <http://www.bls.gov/iif/oshwc/foi/tgs/2010/iiffi47.htm>

² Fatal occupational injuries by selected worker characteristics and selected industry, Tennessee, private industry, 2011, U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, <http://www.bls.gov/iif/oshwc/foi/tgs/2011/iiffw47.htm>

³ Fatal occupational injuries by selected worker characteristics and selected industry, Tennessee, private industry, 2012, U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, <http://www.bls.gov/iif/oshwc/foi/tgs/2012/iiffw47.htm>



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Construction Worker Injuries in Tennessee

In 2010, there were 3,600 nonfatal work injuries in Tennessee's construction industry. Of these, 1,700 required days away from work, job transfer, or restriction.⁴

In 2011, there were 3,600 nonfatal work injuries in Tennessee's construction industry. Of these, 1,800 required days away from work, job transfer, or restriction.⁵

In 2012, there were 2,800 nonfatal work injuries in Tennessee's construction industry. Of these, 1,700 required days away from work, job transfer, or restriction.⁶

Thus, during 2010-2012, there were 10,000 nonfatal work injuries in Tennessee's construction industry, of which 5,200 required days away from work, job transfer, or restriction. This means that more than 50% of the construction industry's nonfatal injuries were serious injuries.

Cost Estimate Calculator

For our calculations, we use the estimated costs per fatal incident and nonfatal incident as reported by Waehrer et al. in 1993 and adjust that figure for inflation (in 2013 dollars). We then multiply the inflation-adjusted cost per fatal accident or nonfatal injury by the number of such accidents in the construction industry in Tennessee in 2010, 2011, and 2012.

In 1993, Waehrer et al. estimated the cost to the economy of each lost worker's life at \$3 million.⁷ This would equal \$4.9 million per fatality in 2013 dollars.⁸

In 1993, Waehrer et al. estimated the cost to the economy of each nonfatal occupation injury at \$25,726. This would equal \$41,479 per nonfatal injury in 2013 dollars.

⁴ Numbers of nonfatal occupational injuries and illnesses by Industry and case types, Tennessee, 2010, U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, <http://www.bls.gov/iif/oshwc/osh/os/pr107tn.pdf>

⁵ Numbers of nonfatal occupational injuries and illnesses by Industry and case types, Tennessee, private Industry, 2011, U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, <http://www.bls.gov/iif/oshwc/osh/os/pr117tn.pdf>

⁶ Numbers of nonfatal occupational injuries and illnesses by Industry and case types, Tennessee, private Industry, 2012, U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, <http://www.bls.gov/iif/oshwc/osh/os/pr127tn.pdf>

⁷ Waehrer G, Leigh JP, Cassady D, and Miller T, Costs of Occupational Injury and Illness Across States, 46 JOURNAL OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE 1084-1095 (2004).

⁸ Consumer Price Index Inflation Calculator, U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTICS, http://www.bls.gov/data/inflation_calculator.htm



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Cost of Construction Worker Fatalities & Injuries in Tennessee

In 2010 through 2012, 66 Tennessee construction workers lost their lives on the job. These fatal injuries imposed an estimated cost on Tennessee's economy of \$324.4 million.

In 2010 through 2012, there were 5,200 nonfatal injuries requiring days away from work, job transfer, or restriction. These nonfatal injuries imposed an estimated cost on Tennessee's economy of \$215.7 million.

This leads to a combined estimated cost to Tennessee's economy of \$540 million, as a result of 66 fatalities and 5,200 nonfatal injuries in the construction industry in 2010 through 2012.

Sincerely,

Keith Wrightson
Worker Safety and Health Advocate
Public Citizen-Congress Watch
(202)-454-5139

Sabrina Morello
Health Care Policy Fellow
Public Citizen-Congress Watch
(914)-262-0066

Amendment No. 1

FILED
Date _____
Time _____
Clerk _____
Comm. Amdt. _____

Signature of Sponsor

AMEND Senate Bill No. 2163

House Bill No. 2018*

by deleting all language after the enacting clause and by substituting instead the following:

SECTION 1. This act shall be known and may be cited as the "Public Construction Contractor Safety Act".

SECTION 2. Tennessee Code Annotated, Title 4, Chapter 3, Part 14, is amended by adding the following language as a new section:

(a) The department of labor and workforce development shall develop a prequalification standardized questionnaire and rating system to assess bidders on objective metrics of occupational safety and health performance for the purpose of prequalifying bidders and their subcontractors on public construction contracts. The department shall consult with occupational safety and health professionals, construction contractors, building trades unions, awarding authorities, and any other interested parties in developing the standardized questionnaire and rating system. The department shall consult with and provide technical assistance to awarding authorities on how to incorporate the questionnaire and rating system into existing systems used by an authority for prequalifying or rating prospective bidders on public construction projects. The department shall also review relevant scientific literature, national consensus standards, and federal Occupational Safety and Health Administration guidance documents to determine key occupational safety and health performance metrics for the purposes of this section. The questionnaire and rating system shall include, but is not limited to, an assessment of whether the bidder and each of its subcontractors:



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(1) Implements written, site-specific occupational health and safety plans that contain the following core elements:

(A) Methods for identifying, assessing, and documenting potential occupational safety and health hazards;

(B) Methods for effectively preventing and controlling occupational safety and health hazards;

(C) Communication of safety information and training to employees;

(D) Methods for assuring that subcontractors on its projects are equipped to comply with its site-specific health and safety plan and are held accountable for doing so;

(E) Record keeping requirements; and

(F) Regular evaluation of and continuous improvements to the site-specific occupational health and safety plan and its implementation;

(2) Demonstrates managerial commitment to the health and safety of workers, other personnel, and the general public by adopting and implementing an explicit company policy;

(3) Promotes employee participation by maintaining policies that encourage employees and the employees of subcontractors while they are working on the project to:

(A) Participate in the establishment, implementation, and evaluation of the company safety and health plan;

(B) Report unsafe work conditions or any work-related injuries;
and

(C) Stop working immediately in the event of hazardous conditions;

(4) Conducts training for employees on occupational hazards and on best practices for maintaining a safe and healthy workplace, provided in a language and format that is understandable to each employee;

(5) Evaluates supervisory personnel based on safety performance;

(6) Shows an acceptable record of compliance with safety- or health-related laws or regulations as reflected in at least the following:

(A) Federal Occupational Safety and Health Administration lost time incident frequency rates and recordable injury or illness frequency rates;

(B) Workers' compensation experience modification rates;

(C) Final assessments of citations and penalties by occupational safety and health agencies;

(D) Receipt of and compliance with any safety-related or health-related stop work orders; and

(E) Violations of any other laws related to occupational safety and health; and

(7) Any other factors the department determines to be a useful metric to assess occupational safety and health performance.

(b) The department shall determine the minimum score a bidder must attain on the rating system to be eligible to bid on any public contract.

SECTION 3. Tennessee Code Annotated, Section 12-4-502, is amended by adding the following language as new, appropriately designated subdivisions:

() "Awarding authority" means any municipality, county, department, or agency of this state including the state board of education and any state college or university operated by the board of trustees of the University of Tennessee or the state board of regents;

() "Bidder" means any business or individual who has submitted, or intends to submit, a bid for a construction contract with this state;

() "Subcontractor" means any business or individual that performs construction work for a contractor;

() "Whistleblower" means an employee who discloses to those in authority, within or outside the corporation, mismanagement, corruption, illegality, or any other wrongdoing regarding workplace safety or health conditions.

SECTION 4. Tennessee Code Annotated, Title 12, Chapter 4, Part 5, is amended by adding the following as a new section:

(a) Any awarding authority soliciting bids for a state construction project with an estimated value exceeding five hundred thousand dollars (\$500,000) shall require:

(1) Each prospective bidder and all of its subcontractors complete and submit the safety prequalification questionnaire developed by the department of labor and workforce under SECTION 2 along with any documentary evidence required to substantiate claims made in such questionnaire. The bidder shall attest to the accuracy and completeness of all information submitted under penalty of perjury;

(2) Each bidder to develop and implement a whistleblower policy regarding workplace safety and health that requires all directors, officers and employees to observe high standards of business and personal ethics in the conduct of their duties and responsibilities. This policy shall include, but not be limited to, describing reporting responsibilities, reporting processes, confidentiality protections, employee education, retaliation prohibitions, identifying compliance officers and an annual review of the program's effectiveness.

(b) Any bidder, or any of its subcontractors, that do not meet the minimum standards of the awarding authority's safety prequalification assessment shall be ineligible to submit a bid on or be awarded any state construction project.

(c) Each awarding authority shall allow bidders and subcontractors the opportunity to apply for safety prequalification at least once every six (6) months. Awarding authorities shall require all bidders and subcontractors to undergo the safety prequalification procedure at least once per year.

(d) Each bidder shall provide the awarding authority a list of all subcontractors that will perform construction work for the contract. Bidders shall not permit any subcontractor that has not been prequalified under this section, at a minimum, to perform construction work for the contract.

(e) Any bidder shall be ineligible to submit a bid on or be awarded any state contract with an estimated value exceeding five hundred thousand dollars (\$500,000) if that bidder does not furnish proof of current workers' compensation coverage as required under title 50, chapter 6.

(f) Any bidder shall be ineligible to submit a bid on or be awarded any state contract with an estimated value exceeding five hundred thousand dollars (\$500,000) if an awarding authority has determined in the preceding five (5) years that a company officer, agent, or person with substantial ownership in the company bidding on such state contract provided false or misleading information under SECTION 2.

(g) Any subcontractor that would, as a bidder, be ineligible to submit a bid on or be awarded a construction contract under this section shall be ineligible for prequalification by any awarding authority under SECTION 2.

SECTION 4. The commissioner of the department of labor and workforce development is authorized to promulgate rules and regulations to effectuate the purposes of this act. All such rules and regulations shall be promulgated in accordance with Tennessee Code Annotated, Title 4, Chapter 5.

SECTION 5. For the purposes of promulgating rules and regulations, this act shall take effect upon becoming a law, the public welfare requiring it. For all other purposes, this act shall take effect January 1, 2015, the public welfare requiring it, and shall apply to all public contracts entered into or renewed on and after such date.

AN ACT to amend Tennessee Code Annotated, Title 4, Chapter 3, Part 14 and Title 50, relative to occupational health and safety.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF TENNESSEE:

SECTION 1. Tennessee Code Annotated, Title 50, Chapter 3, Part 4, is amended by adding the following language as a new, appropriately designated section:

50-3-410. Correction of serious, willful, or repeated violations pending contest and procedures for a stay. -- (a) For each violation which the Commissioner designates as serious, willful, or repeated, the period permitted for the correction of the violation shall begin to run upon receipt of the citation.

(b) The filing of a notice of contest by an employer shall not operate as a stay of the period for correction of a violation designated as serious, willful, or repeated.

(c) An employer that receives a citation alleging a violation designated as serious, willful, or repeated and that files a notice of contest to the citation asserting that the time set for abatement of the alleged violation is unreasonable or challenging the existence of the alleged violation may file with the Commission a motion to stay the period for the abatement of the violation.

(d) In determining whether a stay should be issued on the basis of a motion filed under paragraph (c), the Commission may grant a stay only if it makes a written determination that the employer has demonstrated—

(1) a substantial likelihood of success on the contested matters indicated under paragraph (c); and

(2) that a stay will not adversely affect the health and safety of workers.

(e) The Commission shall develop rules of procedure for conducting a hearing on a motion filed under paragraph (c) on an expedited basis.

SECTION 2. The Commissioner of the Department of Labor and Workforce Development is authorized to promulgate rules and regulations to effectuate the purposes of this act. All such rules and regulations shall be promulgated in accordance with Tennessee Code Annotated, title 4, chapter 5.

SECTION 3. This act shall take effect July 1, 2014, the public welfare requiring it.

Sponsoring Organizations

Knox Area Workers Memorial Day Committee c/o Knoxville-Oak-Ridge Area Central Labor Council

The Knox Area Workers Memorial Day Committee was initiated as a joint project of the Knoxville-Oak-Ridge Area Central Labor Council and Bridges to Justice, both described below. The Committee has organized Workers Memorial Day observances in Knoxville in 2012, 2013, and 2014, and it offers technical support and assistance to other groups interested in holding observances in other parts of Tennessee. In 2013, the Committee became an Associate Member of the National Council on Occupational Health and Safety.

Bridges to Justice
E-mail: BridgestoJustice@gmail.com
(865) 206-0998
<http://www.bridgestojustice.org/>

A worker and community alliance fighting to improve safety and working conditions for those who build Tennessee's bridges and other public infrastructure. B2J was formed in response to the deaths of four men in 16 months on TDOT bridge projects across the state.

Church of the Savior, United Church of Christ
934 N. Weisgarber Rd.
Knoxville, TN 37909
584-7531

<http://www.cos-ucc.org/index.php>

An inclusive, caring, open and affirming church committed to social and economic justice.

Interfaith Worker Justice of East Tennessee
934 Weisgarber Rd.
Knoxville, TN 37920
(865) 584-7531

<http://etiwj.org/>

A local chapter of Interfaith Worker Justice, a coalition of faith communities that advocates for the well-being of all working people. IWJ envisions a nation where workers enjoy the rights to wages, benefits and conditions that allow them to live with dignity.

Ironworkers Local Union 384
1000 Buchanan Ave. NE

**Knoxville, TN 37917
(865) 689-3371**

An affiliate local of the International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers. It represents workers who specialize in heavy rigging, structural and reinforcing steel, welding, and bridge construction. Local 384 has played a major part in the construction of many iconic structures in Knoxville, including World's Fair Park, the Sun Sphere, the City County Building, and both bank towers on Gay Street.

Jobs with Justice of East Tennessee

**1124 N. Broadway
Knoxville, TN 37917
email: jwjofet@bellsouth.net
www.jwjet**

A local coalition linked to national Jobs with Justice/American Rights at Work. It is an alliance of faith-based and community-based organizations, labor unions, and individuals committed to social and economic justice for working people and their families in East Tn.

Knoxville-Oak Ridge Area Central Labor Council, AFL-CIO

**1522 Bill Williams Ave.
Knoxville, TN 37917
Phone: 865-591-2300
<http://tn.aflcio.org/391/>**

An umbrella organization that brings together local unions representing workers in different industries across 13 counties in East Tennessee. For many years it has held observances of Workers' Memorial Day to honor those killed on the job in Tennessee in the previous year.

Laborers' Local Union 818

**10412 Lexington Drive
Knoxville, TN 37932
Phone: 865-966-2009
www.laborerslocal818.com/**

An affiliate local of the Laborers' International Union of North America. As a construction union in this area, Local 818 represents construction workers, radiation workers, hazardous waste workers, asbestos abatement workers and ground/maintenance workers in the area.

Authors of this Report

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