ARCHITECTS & ENGINEERS for 9/11 TRUTH

Exclusive
June 17, 2009

29 Structural/Civil Engineers Cite Evidence for Controlled Explosive Demolition in Destruction of All 3 WTC High-Rises on 9/11

More than 700 architects and engineers have joined call for new investigation, faulting official reports

Gregg Roberts and Staff

The facts are in. The evidence is conclusive. These experts lay it all out.

For Some, the Doubts Began Early

"Something is wrong with this picture," thought Nathan Lomba, as he watched replays of the Twin Tower collapses on television on September 11, 2001. A licensed structural engineer trained in buildings' responses to stress, Lomba saw more on the screen than you or I. He puzzled, "How did the structures collapse in near-symmetrical fashion when the damage was clearly not symmetrical?"

Lomba was hardly alone in his discomfort. Most structural engineers were surprised when the towers fell.[1] They mainly kept their misgivings to themselves, though, as *Scientific American* and the *Journal of Engineering Mechanics,* BBC, the History Channel and government agencies such as FEMA and NIST offered varying and often imaginative theories to explain how fires brought the towers down.

In 2006, San Francisco Bay Area architect Richard Gage, AIA, began raising technical questions among his professional colleagues about the destruction of the Twin Towers and 47-story WTC Building 7. Those who take time to look at the facts overwhelm-ingly agree that vital questions remain unanswered, Gage has found. Today more than 29 structural engineers, experts in what can and cannot bring down buildings, have joined almost 700 other Architects & Engineers for 9/11 Truth in signing the petition demanding a new investigation.[2]

Richard Gage, AIA

They cite a variety of concerns about the "collapses" and the inadequacies of official reports. Many, like Lomba, find the unnatural symmetry of all three collapses suspicious. The rapidity of collapse – acknowledged by the government as essentially free-fall acceleration – was troubling, too. Some note that the fires were weak; others ask how the tilting upper section of WTC 2 "straightened" itself. Everywhere you look, pieces of the puzzle don't fit what we've been told.

New evidence mounting over the years only validated initial discomfort: eyewitness testimony of explosions, unexplained molten iron in the debris pile, and chemical evidence of steel-cutting incendiaries – all omitted from government reports. Many engineers attack implausibilities in the Bažant pile driver model, the 2002 FEMA report and the 2005 NIST report, and also slipshod and dishonest methodology. Finally, the collapse of WTC 7, not hit by any airplane, mystified others. The repeated postponement of the government's report seemed to add fuel to the fire.

Artificial Symmetry

The symmetry of collapse struck Paul Mason, a structural engineer in Melbourne, Australia, and Dennis Kollar, P.E. (licensed Professional Engineer in Wisconsin). Kollar was troubled by the collapses' "totality and uniformity" and the fact that the mass of debris remained centered on the building core all the way down. The towers should have fallen "with increasing eccentricity as the collapse progressed," writes Howard Pasternack, P.E. These systematic collapses required that many structural connections not only fail "nearly simultaneously," but also "in sequential order," wrote Frank Cullinan, P.E., who designs bridges in Northern California. That's "impossible from asymmetrical impact loading and ... small, short-duration fires."

Paul Mason

The engineers find it difficult to believe the government's claim scattered fires brought about such an orderly collapse. Failure of heat-weakened steel would show "large deflection, asymmetric and local failure, and slow progress," David Scott told colleagues at the Institution of Structural Engineers in the UK. It's "a *gradual* process," agrees Anders Björkman, and "cannot be simultaneous everywhere." A Swedish naval architect working in France, Björkman maintains that failures "will always be local and topple the mass above in the direction of the local collapse."


Anders Björkman


William Rice

William Rice, P.E., a Vermont structural engineer, expects fire-induced failures to be "tilting, erratic and twisting." while Ronald Brookman, S.E., a licensed structural engineer from Novato, California, figures on "a partial collapse to the side." Symmetrical collapse requires simultaneous failure of all supporting columns, notes Charles Pegelow. "How could all 47 core columns fail at the same instant?" Pegelow has performed design work on offshore oil rigs and tall buildings. His opinion: "Fires could not do that."


Ron Brookman


Charles Pegelow

Impossible Collapse Acceleration

The National Institute of Standards and Technology (NIST) characterized the Twin Towers' collapse as "essentially in free fall" (Section 6.14.4 of NIST NCSTAR 1).[3] Brookman wrote asking NIST investigators why debris fell "with little or no resistance from the intact structure below." Rice questions how each tower "inexplicably collapsed upon itself, crushing all 287 massive columns on each floor [while maintaining near-freefall speed] as if the 80,000 tons of supporting structural steel framework underneath didn't exist."[4] Falling objects should take "the path of least resistance," notes Pasternack, while official explanations claim that Tower debris took the path of greatest resistance – through the strong, cross-braced core structure all the way to the ground.

The Twin Towers were overbuilt to prevent office workers from getting seasick on windy days, says Kollar. "There's so much redundancy.... The building has to be stiff enough so it doesn't sway." Perimeter columns designed to endure hurricanes, Scott says, were loaded only to "about 10% of their ultimate capacity" in the gentle breeze on 9/11.[5] Gravity was "a negligible part of the loading," says Kollar, citing a claim by the Towers' engineers Worthington, Skilling, Helle & Jackson that even with all the columns on one side cut, and several around the two corners, the Tower would still withstand 100 mile-per-hour winds.[6]

The rapid breakup of this robust structure appears to defy the laws of physics, engineers say. Forty-five years of structural design experience inform the view of Claude Briscoe, P.E., that the government's collapse theories "seem to defy the laws of mechanics, conservation of energy, and known structural failure behavior." In the official story, the kinetic energy of the falling debris would have been largely absorbed by the energy required to dismember the structure, bending and twisting steel components, and pulverizing 220 acres of concrete floors. To accomplish all this while achieving a nearly free-fall-speed collapse is "simply not physically possible," says Mason. "There is not sufficient energy available.... For this massively strong structure to just crumble away at near-free-fall speed would have required immense amounts of explosive energy."

Weak Fires Vs. Explosive Events

Though four official accounts blame fire for the destruction of all three World Trade Center towers, the fires do not appear to have been particularly severe. NIST states that the jet fuel burned off in just ten minutes.[7] "They also acknowledged that office furniture burns for only 15 to 20 minutes in any one area" before it's consumed,[8] Scott points out. "There's ample evidence that the steel temperatures got nowhere close to the "600+ degrees Centigrade [1,200

degrees Fahrenheit] required to cause failure."

We saw no "raging infernos" on TV, David Huebner, P.E., points out. Sooty smoke and dull red flames, Scott says, indicate "cool fires ... fuel-starved fires." Firemen at the 78th-floor impact zone reported "only two small fires," Scott adds, "not the 1000-degree-Centigrade inferno" government officials claim.

New York Fire Department (FDNY) personnel, trained to assess fires' structural hazards, had no reason to expect total collapse, Brookman writes. Scott notes that several steel-framed towers have burned longer, hotter – and much more intensely without collapse. "As engineers we know what fire can do to steel and what it can't."

"Over 100 recorded witnesses reported hearing and seeing multiple explosions," Rice wrote.[9] Brookman cites "numerous eyewitness accounts, including the FDNY oral histories, of secondary explosions ... well below the impact floors." His letter to Congressional representatives describes "explosive clouds of dust and debris moving horizontally and vertically." Brookman added: "That does not look anything like a heat-induced, gravitational collapse mechanism." Rice notes that "perimeter columns weighing several tons each were ejected laterally up to [600] feet." His conclusion: "Not possible without explosives."

Angular Momentum Arrested

As the South Tower began to fail, the top 25 stories tipped as a unit, photos show. "The tilting block doesn't look right," Brookman said. It should "continue to rotate and fall to the ground." Edward Knesl and Lomba say the same thing. The failure mode of such tall structures should have been "a fall over to the side" (Knesl) and "a toppling of the upper floors to one side ... not a concentric, vertical collapse" (Lomba). "It looked like an explosive event," Brookman said. "[The upper section] began tilting toward the damage zone, and then suddenly dropped straight down and disintegrated in the process."

The South Tower's top tilted 22 degrees, then disappeared straight down into the rubble cloud.

Building 7's Mystifying Implosion

Baffling as the Towers' "collapses" were, even more perplexing was the destruction of World Trade Center Building 7. "Unprecedented," says Rice. "Unexplainable," says Huebner. "No plane hit this building," points out Graham Inman, a chartered engineer in London.

WTC 7 came down in full free-fall for 2-1/4 seconds and very near free-fall overall.

Few Americans have given any thought to the third World Trade Center high-rise destroyed on September 11th, since it was not repeatedly televised. Kamal Obeid, S.E., ponders it. "A localized failure in a steel-framed building like WTC 7 cannot cause a catastrophic collapse like a house of cards without a simultaneous and patterned loss of several of its columns at key locations within the building."

Kamal Obeid

Videos show "simultaneous failure of all columns," wrote Inman, "rather than [the expected] phased approach," in which undamaged columns would show resistance sequentially.

Though the building housed "offices of the CIA, the Secret Service, and the Department of Defense, among others," Rice notes, the 9/11 Commission left WTC 7's collapse out of its report. FEMA's 2002 inquiry blamed WTC 7's collapse on fires, though it admits that its "best hypothesis has only a low probability of occurrence." Rice notes that the media have "basically kept the collapse of WTC Building #7 hidden from public view."

The Phantom Pile Driver

Two days after 9/11, Dr. Zdeněk Bažant offered a rationale for the most catastrophic structural failure in history. Seven years later, his thesis[10] still underlies official claims that total collapses were "inevitable." Bažant's mathematical model of the

Zdeněk Bažant

upper floors' transformation into a pile driver "block" free-falling one story to hammer the entire tower into scrap metal and powder involves "very misty allegations – actually inventions," says Björkman. His opinion derives from thirty-five years in ship surveying and construction, design of tankers and seagoing ferries, and practical observations of steel vessels after collisions. Never before, Björkman notes,

Other Engineers Agree

Not all the structural engineers who have signed the petition at AE911Truth.org are quoted in this article. But all of them support a new investigation, primarily because of the evidence of controlled demolition presented on our website.

has "a smaller object (the light-weight, upper, actually non-rigid, flexible steel structure consisting of many smaller parts) destroyed the bigger and stronger other object (the complex steel structure below) only with the assistance of gravity."

Björkman scoffs at Bažant's mythical free-falling top block bringing 287 columns hammering down in perfect array on the 287 columns below. Steel bends and mashes in Björkman's salty world, and "it is not certain that the hammer even hits the nail." Real-life columns miss, lodge in horizontal structures, and punch holes in floors, creating energy-absorbing frictions, deformed steel, local failures, and "a soft collision (not impact!)" that tangles damaged floors in a shuffled array – and stops well short of total collapse.

Videos show that Bažant's alleged pile driver disintegrates "within 3.5 seconds after the roof starts to fall.... before global collapse starts!" Björkman challenges Dr. Bažant and his followers to produce a "timetable, analysis, and explanation" consistent with the video evidence. "And tell us ... what happened to the upper block!"

Molten Iron "Flowing Like Lava"

Steel starts melting at 2700° F, almost 1000° hotter than jet fuel fires, notes Pegelow. "Why did the NIST investigation not consider reports of molten steel in the wreckage?" he asks. FDNY Captain Philip Ruvolo reported seeing in the basements "molten steel ... like you were in a foundry, like lava."[11] Even Leslie Robertson, one of the design engineers of the World Trade Center and a supporter of the official collapse story, reportedly acknowledged on October 5, 2001 that "twenty-one days after the attack, molten steel was still running."[12] Richard Garlock, a structural engineer in Robertson's firm, said "Going below.... the debris past the columns was red-hot, molten, running."[13] Dr. Abolhassan Astaneh-Asl, another supporter of the official story and the first structural engineer given access to the WTC steel, told PBS, "I saw melting of girders in [the] World Trade Center."[14]

Capt. Philip Ruvolo

Jet fuel can't melt steel, "but thermite explosives/incendiaries can ... create temperatures in excess of 4000 degrees Fahrenheit..." writes Rice, "instantly melting/severing short segments of steel columns and beams." Chemical evidence of thermite found in the powdered debris by physicist Dr. Steven Jones[15] is cited by Rice, by Obeid, and by Clark Townsend. Brookman challenges NIST to explain tiny "iron-rich spheres found in the WTC dust," which appear to be solidified droplets of once-molten iron.[16]

Dr. Steven Jones

Crucial Evidence Survives Discredited 2002 FEMA Report

The FEMA 403 report[17] was "incomplete at best and a cover-up at worst," says structural engineer Michael Donly of New Jersey, noting that a metallurgical study in its Appendix C.2 found "evidence of a severe high temperature corrosion attack on the steel ... with subsequent intergranular melting" forming a "sulfur-rich liquid" that "severely weaken[ed]" the structural steel. FEMA scientists later state in Appendix C.6 that "no clear explanation for the source of the sulfur has been identified." Donly finds that unacceptable. "The report has uncovered an unexplainable phenomenon [within the context of the

Michael Donly

official story] that may have led to the collapse of the 3 WTC buildings," he writes, "and has stated that further study is needed, but FEMA has not proceeded with further research."

WTC steel sample after hot corrosion attack. FEMA, Appendix C

Evidence was not just ignored; it was destroyed. Firemen rioted at Ground Zero,[18] protesting the desecration of the dead in a hasty "scoop and dump" clean-up of the structural steel debris. "The destruction of the crime scene evidence is inexcusable," Huebner writes. Scott laments the "masses of vital forensic evidence" lost, and Bill Manning, Editor in Chief of *Fire Engineering* magazine, called FEMA's investigation "a half-baked farce."[19] Steel components were stamped with identification numbers that would have aided their reassembly for study, but that reassembly never took place. Brookman asks, "Why was the steel ... not thoroughly examined by fire-safety and structural experts before being shipped to Asia for recycling?" Pegelow charges that "FEMA hampered and distorted the investigation," citing Dr. Abolhassan Astaneh-Asl's complaints in 2002 to the House Committee on Science that FEMA held back essential engineering drawings and videotapes and photographs.

Such flawed methodology was accompanied by inadequate theories that "cannot explain the loss of the cores," Scott points out. He says FEMA's notion that floor connections all failed simultaneously at the outer wall and at the core is "not too plausible." Bill Genitsaris, structural engineer and builder based in Melbourne, believes that a pancake-style collapse should have left supporting columns standing. Such a collapse would have left at least dozens of shattered floors in the building footprint below. Only very small floor sections were found, and not many of them.

Deceptive presentation further damaged FEMA's credibility. Tom Lackey, who designs bridges for the Vermont Agency of Transportation, cites the Minneapolis Bridge collapse study as the "kind of analysis and straightforward explanation" the WTC needs. FEMA's reports stack up poorly. Some of its graphics "omit the cores altogether," says Scott, and some depict columns half as wide and twice as far apart as they actually were. Scott decries "attempts to distort important technical information." The Australians use more colorful terminology: Mason says we have been "taken for suckers;" Genitsaris says we've been "stooged."

Truncated and Fudged Computer Model Undermines NIST Report (2005)

NIST's $20 million report is generally believed, by those who haven't read its 10,000 pages, to explain how fires and plane impacts destroyed the WTC. "The report not only fails to explain why and how the towers completely collapsed," Brookman points out, "but it states that the collapse became inevitable without any further explanation." He asks why NIST "considered conservation of energy and momentum principles only up to the moment *prior* to collapse." NIST stopped its computerized models before the onset of collapse," Scott complains. "No work was done to calculate what happened during the failure. Why are we content with this?" Ron Brookman adds: "The complete collapse mechanism ... cannot be 'omitted for brevity' in any comprehensive analysis."

NIST's Report on the Twin Towers

A Note About 9/11 "Debunkers"

It could be hoped that the comments from the structural engineers quoted in this article would silence the "debunkers" who dismissed our arguments first because, allegedly, no engineers agreed with us. That was never true to begin with. After AE911Truth was formed and scores of engineers signed the petition, these debunkers predictably moved the goalposts, saying we didn't have any engineers who know anything about heavy steel structures such as tall buildings. Since the 29 engineers interviewed for this article do in fact possess that knowledge, the goalposts will no doubt just be moved again. This kind of behavior should make clear the nature of the game that is being played. One word for it is sophistry.

NIST's claim that a kinetic "attack" exceeded the building's reserve strength is not supported by any calculations or "by any evidence whatsoever or any

serious structural analysis," states Anders Björkman.

While NIST fails to show essential work on central issues, its numerous volumes are packed with distracting trivia. Huebner, whose twenty-five years of structural engineering experience includes forensic investigation of structural collapses, compares NIST's effort to a "college paper where you just keep adding [stuffing] to make the paper longer. Lots of pages of nothing! Definitely trying to cover up something."

Brookman asked NIST investigators to explain the "complete pulverization of building materials and contents" and "visibly explosive clouds of dust, ash, and debris." He received no reply. "I believe in the laws of physics," wrote Brookman, "and rely on them every day." NIST's reports "seem to require multiple leaps of faith in highly improbable events," wrote Pasternack.

Computer models using NIST's best estimates of temperature and damage could not even generate a collapse, Scott points out. They'd "simply adjust the input until the desired outcome is achieved." NIST probably overestimated core column damage, Scott believes, almost certainly overestimated steel temperatures, and definitely overestimated damage to fire protection. So important an inquiry should "rely on logical deduction, reason and first-principle analysis," Scott says, "not circular reasoning and adjusting models to get agreement with a preconceived explanation."

47-Story Building 7's Near-Freefall Collapse Defies NIST Report (2008)

"We've had trouble getting a handle on building No. 7," NIST's Dr. Shyam Sunder acknowledged to *New York Magazine* over two years ago. David Topete, S.E., asks why no other nearby buildings collapsed when some were much more severely damaged by fire and Twin Tower debris. NIST's recent report blames one buckling column, number 79, for WTC 7's global and near-symmetrical collapse, yet characterizes WTC 7's fires as "normal office fires" which only burn twenty minutes in any given location before moving on.

David Topete

Obeid rejects the suggestion that one failing column could pull adjacent columns down. "It is not possible for a local failure within the lower structure to spread horizontally," he wrote recently. "Such a failure would cause a break-away ... instead of pulling the structure with it." Even if NIST's horizontal progression were somehow triggered, Obeid says, "the building would not have collapsed so neatly and symmetrically. All core columns have to be severed at the same time to make such a collapse."

Disturbing Questions That Must Be Answered

To preserve America's "unprecedented freedoms," Clayton Simmons says, "we must pursue the truth." He is troubled by "my profession's involvement in this apparent cover-up and the media's refusal to address important questions."

Scott too expresses wonder that structural engineers' response "has been amazingly muted," even "uninterested." Rice found that politicians also lacked interest. Many people "remain willfully ignorant," writes Genitsaris. "They believe that 9/11 does not affect their lives ... regardless of the fact that our freedoms are being taken from us." Perhaps few are questioning, Brookman says, because it's "painful to look directly at the events and consider the implications."

William Acri, P.E., believes that the engineer's oath "to hold public safety above all else" demands that they raise questions. If three modern steel high-rises really underwent total progressive collapse in less than two hours of fire, merely because of the fires and some damage to the fireproofing, "we need to understand WHY!" Scott writes. If WTC 7 failed from a localized fire event, Inman asks, why didn't the owners and insurers sue the designers? "Either the building design was criminally faulty, or other causes not related to the structural design or fire" brought down WTC 7, he says.

Why Should Science-Based Forensic Evidence Be Taboo?

From all across America, and from Australia, Canada, the UK, and France, the structural engineers we spoke with for this article join more than 675 other

Architects and Engineers for 9/11 Truth in calling for a new investigation into the catastrophic destruction of the *three* World Trade Center high-rises on September 11. “The implications of the controlled demolition hypothesis as outlined on the AE911Truth.org website are staggering,” says founding member Richard Gage, AIA. “We therefore invite all Americans to examine the science-based forensic evidence very carefully and come to their own conclusions.”

Lomba’s conclusion, drawn from his initial perceptions and validated by subsequent developments, is clear: “Even if, for the sake of discussion, we accept the hypothesis that the fire protection was damaged and the fires somehow weakened the steel frames, that still does not explain the relatively concentric nature of the failures.” Scott challenges his fellow structural engineers: “The building performance on 9/11 matched controlled demolition. It does not match fire-induced collapse. We have the expertise to discern this. Do we have the courage to broadcast it?”

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All the structural engineers below have signed the AE911Truth petition. Not all of them were interviewed for this article.

Name	Credentials / Education / Location	Bio
William W. Acri	P.Eng. Lic: 143016 BASc Toronto, ON – Canada	Construction Engineer, and Structural Consultant, in Toronto, Alberta, and BC. I have used explosives on many road projects.
Antonio Arthay	P.E., Lic: 57912, M.S., Structural Engineering, Illinois; West Palm Beach, FL	Licensed Structural Engineer with 15+ years of experience in building design.
Anders Björkman 	Naval architect & Marine engineer *M.Sc. Beausoleil, Alpes Maritime – France	40 years of steel structural design, operations, damage analysis and repairs (of ships) but the principles are same for other structures, e.g. towers
Jim Bomford	P. Eng., B.A.Sc. Engineering, UBC, Cowichan Bay, BC – Canada	A civil engineer and former structural engineer practising in the Province of BC for thirty five years.
Claude Robert Briscoe	P.E. Lic: Civil Engineer C17546 -- California BS Engineering, UCLA Santa Rosa, CA	45+ years in civil and structural engineering design and construction with project work in bridges, buildings, foundations, earth retaining structures, roads, highways, and various commercial, industrial and public works facilities.
Ronald H. Brookman 	Structural Engineer Lic: Structural Engineer 3653 CA Civil Engineer 44654 CA, B.S. & M.S. Engineering, U.C. Davis Novato, CA	Mr. Brookman is a licensed structural engineer in the state of California. He obtained B.S. Civil Engineering (1984) and M.S. Structural Engineering (1986) degrees from the University of California at Davis, and has over 21 years experience in structural analysis, design, evaluation and rehabilitation of buildings in northern California.
Frank J. Cullinan	P.E. Civil Engineer Lic: C 50794 CA B.S. Civil Engineering Trinidad, CA	My expertise is in structure construction of bridges and to a lesser extent demolition of bridges.

Name	Credentials / Education / Location	Bio
Erwin De Jong 	MSc Mechanical and Structural Engineering, Master, The Hague, Zuid Holland – The Netherlands	Master degree Mechanical Engineering obtained at University of Twente (Netherlands) Currently occupied in offshore (steel structure) and aerospace engineering.
Michael T. Donly 	P.E., Structural/Civil Engineer New Jersey B.S.C.E. N.J. Institute of Technology 24GE04422400 Hackensack, NJ	Consulting Structural/Civil Engineer New Jersey PE 2003 BSCE-New Jersey Institute of Technology 1995 Over 13 years of engineering design experience. Donly Engineering Group, Inc. 2004-present Founder/Principal Expertise in Low-Rise Building Design, Renovation, Assessment & Rehabilitation
Rick Fowlkes	P.E. Lic: 13162 AZ/ 35889 CA BSCE & MBA Mesa, AZ	Registered professional engineer - Arizona Structural - PE; California - Civil-P.E. President of Fowlkes Enterprises, Inc. since 1983 in Mesa, AZ. Republican Party candidate for Arizona State Corporation Commissioner.
Bill Genitsaris	Consulting Structural Engineer & Builder BA Engineering, Uni. of Melbourne Melbourne, VIC – Australia	Consulting Engineer with over 20 years experience in Civil and Structural Engineering. Worked in the fields of structural engineering design, construction, demolition, investigation of building movements and disputes. Worked for many years as a senior consulting structural engineer in the residential and commercial fields. In those years, provided professional services from engineering design advise for new and existing buildings, construction and demolition advice/procedural recommendations, to remedial works recommendations for buildings which are cracking/moving….
David G. Huebner	P.E. Lic: 6201036077 MI Professional Engineer BSCE Auburn Hills, MI	Since graduating college in 1982, I have worked in the structural engineering field. In 2000, I started my own consulting business as a structural engineer. I have experience with wood, concrete, and steel design as well as some forensic experience investigating collapses of structures. I also have experience as a paid on call fire/rescue worker.

Name	Credentials / Education / Location	Bio
Edward E. Knesl	P.E., S.E. Lic: C 22102 AZ, S 22172 AZ M.S. Engineering Phoenix, AZ	Full Master Degree study of Civil and Structural Engineering. Thirty five years of experience domestic and overseas in commercial and transportation projects : - Structural Design and Analysis - Construction Administration and Management - Plan Review - Special Inspection
Dennis J. Kollar	P.E., Structural Engineer Lic: 34422-6 Professional Engineer exp 2008 B.S. + Graduate Coursework West Bend, WI	I began my career in the 1980's as a Structurally Certified Welder and held various welding positions in a shop fabrication environment. I received my B.S. in Civil Engineering from the University of Wisconsin - Milwaukee in 1993 with an emphasis in Structural Engineering. I have several years experience in Municipal Engineering and site design and 10+ Years experience in the structural design of residential, commercial, industrial, and institutional structures of steel, concrete, masonry and timber.
Thomas H. Lackey	P.E. Engineer Lic: 018-0005701 VT B.S.C.E., UVM 1985 Stowe, VT	I began my career as a Geodetic Surveyor in the US Army in Germany from 1979-1982. I studied Civil Engineering at and graduated from the University of Vermont with a BSCE from 1982-1985. I practiced as an EIT in Alaska, New Hampshire and Vermont primarily in land development from 1985-1989. I passed my P.E. exam and became licensed in Vermont in 1989. I joined the Vermont Agency of Transportation in 1989 where I have worked in the Structures Section since 1995.
Nathan S. Lomba	P.E., S.E., M.ASCE; 4132 C/S ID, C43284 CA; B.S.C.E., U. of Colorado; Eureka, CA	Consulting civil/structural engineer with over 22 years in private practice (39 years total). Experience ranges from custom residential to heavy industrial structures. Some major project involvements include: Lead civil/structural engineer on a $700 million project for the US Air Force; structural design engineer for a 41,000 sq. ft. Pulp Machine Building; and Resident Engineer on a 550 MW Natural-gas fired power plant. Idaho PE, 1980 Idaho SE, 1990 California PE, 1987 BSCE, 1976, University of Colorado, Denver/Boulder, CO Professional Affiliations: Member, American Concrete Institute (ACI) Member, American Society of Civil Engineers (ASCE) Charter member, Structural Engineering Instititute (SEI) Professional member, American Institute of Steel Construction (AISC)

Name	Credentials / Education / Location	Bio
Paul W. Mason 	Structural Engineer; Engineers Australia Member #34040 (Also Association of Professional Engineers, Scientists & Managers, Australia, member # 222349); Melbourne, VIC – Australia	33 years experience designing, constructing and maintaining major structures for state government agency.
Travis McCoy 	Design Engineer, BS Civil Engineering, Cincinnati, OH	I received my BS in Civil and Environmental Engineering from the University of Cincinnati in 2007. I am currently working on my MS in Structural Engineering at the University of Cincinnati as well as working for a local structural engineering consulting firm.
Dr. Robert T. Mote	PhD, Structural Engineer, Lic: APEGGA, B.Eng (Hons), Calgary, AB – Canada	+20 years experience in structural design. Special interest in dynamic and explosion behaviour of structural elements and foundations.
Arthur Nelson 	P.E. Lic: MA PE 32785 M.Sc., Structural Eng, Northeastern Seekonk, MA	Structural engineer since 1986. Involved in design of hundreds of steel structures though none have been involved in airplane collisions.
Kamal S. Obeid 	SE, PE Lic: Structural Engineer 2826 CA, Civil Engineer 35214 MSCE, UC Berkeley, Fremont, CA	Consulting structural engineer specializing in building and other structures design and retrofit. California SE 1985 California PE 1982 MSCE 1980, UC Berkeley BSCE 1978, University of Texas, Austin

Name	Credentials / Education / Location	Bio
Howard Pasternack	B.A.Sc., P.Eng. Lic: 90261421 B.A.Sc. Civil Eng., U. of Toronto Toronto, ON – Canada	B.A.Sc. Civil Engineering (specializing in Structural Engineering) 1986 Graduate work at U. of Alberta to 1989 Design, Analysis and Inspection of Structures: Anrep Associates to 1990 Design, Analysis and Inspection of Structures: Morrison Hershfield to 1993. Design, Analysis and Inspection of Structures: CanDesign Engineering Services 1993-present.
Charles N. Pegelow 	PE, Civil Engineer. lic Calif CE 26344 exp 2008 Houston, TX	(none provided)
William Rice 	P.E. Lic: 018-0002991 VT MS Civil Engineering, Cornell Univ. Randolph Center, VT	I earned my BSCE degree from the University of Massachusetts with a major in structures and later an MS degree in civil engineering from Cornell University. After graduation from UMass, I was employed in the field by two of the nation's largest building construction companies, first the Austin Company (a design/build firm) and later the George A. Fuller Construction Company. The construction of one of the Austin Company building projects was the basis of my master's thesis. I also taught building design and construction related courses to civil engineering and architectural students at Vermont Technical College for twenty years.
Jérôme Royer 	Engineer, Mechanical Engineering, Paris – France	Degree in mechanical/structural engineering and degree in engineering for high energy physics experiments.
Alaa Rustom	Structural and Geotechnical Civil Engineer, BSC Structural and Geotechnical Civil En Ottawa, ON – Canada	With over a year's experience in the structural field, I am a new graduate of structural and geotechnical Civil Engineering. I have just graduated from the University of Ottawa, and pronounced an Obligated Engineer by ward 12 on an obligation to work with the highest quality of workmanship in my field.
David Scott	AMICE, CEng, MIStructE Beng Auchterarder, Perthshire – Great Britain	Consulting Structural Engineer, with 20 years experience of building design and founding director of a structural and architectural design practice in Perthshire, Scotland.

Name	Credentials / Education / Location	Bio
Clayton J. Simmons	P.E., Associate Engineer Lic: 72749 (CE) CA B.S.C.E., Brigham Young University, Santa Rosa, CA	Mr. Simmons studied at Brigham Young University, graduating with degrees in Russian and Civil & Environmental Engineering with an emphasis in structures. He had the unique privilege of being one of Dr. Steven Jones' physics students prior to 9/11, learning from him the principles of conservation of energy and momentum. Following his formal training, he returned to his native Santa Rosa, California and has worked for the past three years in the engineering profession, analyzing and designing water-based infrastructure and residential structures.
David Topete 	S.E. Lic: S4793 CA C59280 CA B.S. Civil Engineering, Santa Clara U San Francisco, CA	After working as a Junior Engineer, I returned to pursue a Master's degree (just short). I have been a designer throughout my career, mainly residential, commercial and light manufacturing facilities.
Clark W. Townsend	Civil Engineer Lic: C47921 CA BSCE CSU-Fort Collins, Colorado Sacramento, CA	I received a BS in Civil Engineering from a four year accredited university in 1986. I became a licensed Civil Engineer in the State of California in 1991. I have worked in several fields of civil engineering including structural design.