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Keynote Address:

**Is C&D Waste short for Calamity and Despair?
Or, does it provide Challenges and Opportunities**

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Good Morning and I'd first like to thank Dan Moon, Tom Mackie and Ben Harvey for extending the offer to address this Sixth Annual EBC and DEP Summit. I thank you for inviting me to share my experiences, my thoughts, and even my dreams related to the C&D recycling industry.

As our industry moves into 2012, I wish to note those on the outside of our industry have a myriad of views of what we actually do on a day-to-day basis. Some are correct, some are close, and some [to coin a new American term], are just teboying it. As you may know, teboying is a new verb and means to get down on a knee and start praying. Over the years I have had contractors say to me that "I am just praying that it works!" interesting analogy; but then you all know what the Patriots did to the Bronco's last weekend.

I have been involved in the solid waste field since Feb. 1972.....almost 40 years, and I feel it....Usually GBB represents the public sector in putting business deals together, like collection service RFB's and negotiating contracts; we also write RFP's for the design and construction of turnkey or full service C&D processing facilities. I have also been involved in implementing large scale waste-to-energy plants, up to 2000 tons per day, and many traditional materials recycling

facilities (commonly called MRF's) around the country. I have also completed consulting work for the National Demolition Association (NDA) and the Construction Materials Recycling Association (CMRA).

To-date, I have given over 110 live speeches or telephone webinars. I have even written a few articles for Bill Turley's and Brian Taylor's magazines over the years. But this is my very first "keynote address". Oftentimes my wife says: Bob, why are you continuing to do this? My answer is always the same: I love it...I love the people and the challenge, and in my own little way, I like to think that I am making a difference in helping make our country, and the world, be better environmental stewards of what God has given to us.

Many many years ago while in paradise, Eve convinced Adam to share her apple. With one bite, their lives, as well as ours, have never been the same. While that might be hard for most of use to relate to, let me speak in modern terms. Most of you may be familiar with the person called Mother Teresa of Calcutta. She was a person of short stature that was admired and loved by millions around the world...and when she spoke, in a soft voice, – people listened. Then you have Donald Trump. A tall man that is never short on words or opinions, but fortunately or unfortunately, only sometimes does he impact our lives. The difference between these two persons, and their approach to life, is stark.

For most in this room, when the Mass DEP (with staffer Jim McQuade behind the scenes) passed the first C&D material bans in 2006 on asphalt paving, brick, concrete, metal and wood, your lives and businesses were forever changed. For some, your fortunes or misfortunes have never been the same. This is not to imply that the Mass DEP is God or even our friend Jim McQuade the modern day Adam; but regulators are called regulators for a reason!

However, I would like to think that most of us in this room are more like Wes Welker; ready to receive a Tom Brady pass if near, and always ready to make a contribution to the team in whatever way possible.

As I have moved within the solid waste circles for the past four decades, I have notice one simple fact. Things get done for one of three reasons: Need, Fear or Greed. You might hear, I need to do this! You might hear: If I don't do this, then this is going to happen! Or, you might overhear in the board room, if we can do this we can make a lot of money.

I am not here today to judge your motives or value systems. I could summarize my own initiative of 40 years ago simply by saying: I graduated from college and needed a job. The fear was created by my father who also said that I needed a job, and when are you going to get out of the house! And finally, since I had no money, the greed part was very easy to understand.

I have been very fortunate that over the past 40 years. I have had only 4 jobs.... and one wife! She's a saint, figuratively speaking, for putting up with me and all my solid waste adventures over the past four decades. But that is what commitment is.....excitement of marriage, and committing to put up with the bad times and the good times, and working together for our mutual benefit.

In December 1903, the Wright Brothers flew 120 feet at Kitty Hawk NC. I was not there, but I know the story! Today, United Airlines, as an international service provider, has over 1200 large airplanes in their fleet and carried over 142 million passengers last year. So it is possible to take ideas, mix them with a dash of opportunity and perseverance, and grow a great and successful business. With the possible exception of the Chicago Cubs, no business can stand still and survive.....and since I am in Patriots and Red Sox territory, I won't go there any further.

I was one of the three founders of GBB in 1980. Thus, over 30 years' ago we started offering solid waste consulting services --- with no business in hand! At the end of the first week, we nailed our first client.

Ten years into our business activities, a friend of mine from a large international consulting firm called and asked if GBB would like to team with them to propose on a project to perform a C&D Recycling Feasibility Study. At that time, GBB had completed numerous solid waste and recycling studies, including several for traditional source-separated multi-material recycling plans, but we had never done a recycling study on C&D materials. As any small and budding entrepreneur would say under those circumstances, if we can figure out a plan for mixed solid waste materials, we can certainly handle a C&D study as well. So our new and ongoing adventure into the world of C&D waste, with processing and materials marketing began, with our first C&D Recycling Plan report, 20 years ago. Oh yes, I forgot to tell you that the location of the project was Hong Kong!

After competing with consultants from all over the world, our team was selected and I flew off to Honk Kong, and the Junk Bay landfill was my luxury vacation outpost for part of 1991. Soon after that industry-opening experience with that initial engagement, GBB sponsored the first two national C&D conferences in 1993 and 1994... this was all pre-CMRA.

In the late 1990's, I was a contributing editor and wrote quarterly C&D articles for Bill Turley's initial magazine for 4 years, and GBB has done over 120 C&D waste-related engagements in the past 20 years, all over the country. But with that initial call in 1990, I could have easily said to my friend: No thank you! But I sensed an opportunity, and my entrepreneurial instincts kicked in.

Taking risks, and stepping out of your comfort zone, is a key part of growing any successful business. However, almost all in this room will also acknowledge that working closely in the

C&D world involves dealing with environmental matters, which at times, are elusive to identify. Additionally, this is compounded by ever-changing political policies, which, at times, undermines progress and feeds-off what we, in the Washington D.C. area, call “crony-capitalism.”

In the July 1994 edition of C&D Debris Recycling, Bill Turley’s lead editorial page citation was as follows: “Note to EPA: Come see the real world!” His text additionally read: “....Think about it: a bureaucrat sitting in Washington, D.C., taking actions that affect our industry, and yet never having seen a plant....It just boggles the mind the power some regulatory agencies have and how little they know about the industries they affect.”

Several years ago I was trying to put the construction waste and demolition debris (C&D) industry into an easy-to-identify metaphor to a group of non-C&D industry folks. Since they were outsiders and knew nothing, I told them that C&D really stood for “calamity and despair”. We all laughed.....but soon afterwards, I thought more about it; and obviously I did not really feel that way.

When I started working 40 years ago, I was given a Dictaphone to dictate my letters and have them transcribed by a secretary. We had stinky thermo-fax paper and one hard wired phone that went through the company “plug-in switchboard”. Many might still refer to that period as the “good old days”.

In the early 1990’s, the processing of mixed C&D waste was in its infancy. While inerts like concrete and rock were crushed and screened, the true opportunities for mixed C&D processing and materials recovery were very limited. A few European suppliers were popping up like Lindeman, Hazemag and Bezner, with a few additionally crushing and screening firms of US roots, which were migrating into C&D processing from other industries.

GBB had about 100 to 125 attendees show up at each of our 1-1/2 day C&D conferences in Philadelphia in 1993 and 1994, with the highlight being a field tour of the Haines and Kibblehouse new Hazemag mixed C&D waste processing facility near the Philadelphia Airport, and then a tour of the Winzinger concrete crushing system and wood grinding operations in South Jersey. Things were very simple then, but the risk-taking entrepreneurs and the state regulators were just a few steps behind. These two companies, along with Star Recycling in Brooklyn and Jet-Away in Boston were early adopters, so-to-speak, and the race was on. Changing Calamity into a Challenge, and Despair into an Opportunity would move dollars and environmental stewardship to center-stage.

When I was in college, every engineering student was required to have a slide rule and tee-square. For the younger techies in this crowd, I still have mine in my 45 year-old memorabilia case, and I can email you a picture if these “items of reference” are too obscure to understand.

However, today I have my laptop, my Smartphone and APPS of all sorts loaded to make sure I don't get lost or bored. I have learned to change my ways, and take advantage of these modern marvels.

As the C&D processing and materials recovery industry has grown, so has our allies. While not the panacea for extensive materials marketing, the formation of the U.S. Green Building Council (USGBC) occurred in 1993 and the first Leadership in Energy and Environmental Design (better know as LEED) Pilot Project Program was launched in August 1998. As of November 2011, just 13-years later, there are 32,000 commercial LEED registered projects with an estimated 11,000 commercial LEED projects having been certified. This USGBC effort has done a lot to raised awareness of the C&D materials recovery marketplace.

The industry has grown from a few "admitted C&D recyclers" in the 1990's to several hundred today. GBB estimates that over 150 mechanical C&D processing plants are operating in the United States today. I am sure that others exist, and still others doing C&D materials recovery the old fashion way. Fortunately, our industry has a good base of competitive companies working the C&D equipment and full-system supply chain, with half headquartered in Canada.

A relatively small geographic area like the Commonwealth of Massachusetts, with about a dozen C&D materials processing plants, is an anomaly in the country. However, while you are a shining example of states-rights, at times, as you know, the federal government and other states-rights can interfere with the dream. We need to keep in mind the famous 1937 Steinbeck novel quote "the best laid plans of mice and men often go awry".

However, over my 20 plus years of both participating and observing this fledging industry, I have seen the growth and enthusiasm rise and fall several times, and the roller coaster ride will without a doubt continue. There is a simple quotation from founding father Thomas Paine's "The Crisis" that goes as follows: "These are the times that try men's souls'."

No one said our lives would be easy or we all would be born with silver spoons in our mouths. However, I know some of the greatest human beings on this planet are involved in the solid waste field, and possess a passion to use the discards of society to carve out, in many cases, a family business, that offers the potential for economic security in these tough financial times.

We are all risk takers; it is just a matter of degree. How many people in this room have heard of Star Recycling from Brooklyn? When Star Recycling was operating in the 1990's as one of the largest C&D recyclers in the US, they went through a least four major modifications of their mixed waste C&D processing system equipment to address market changes and/or processing equipment improvements. They were a major C&D waste collector, but had no landfill. Thus, waste recycling and landfill diversion was their constant financial motivation. Ultimately, Star

sold to Waste Management who promptly took the torch to the equipment to create scrap metal and the 10 year old C&D recycling site soon became a transfer station.

I, and you, can't afford to stand still in this industry. Look around the room, your table mate is your friend --- and your competitor; strange bed fellows, huh?

When I started investigating the industry for marketable products, crushed aggregate, wood fuel and metals were the primary products. They made up the majority of the material, and the industry outlets in the early days. As the concern about the environmental implications of our industry became more prominent, lead-based paint issues, CCA wood issues and asbestos fibers were identified as market-based obstacles. Over the past few years, hydrogen sulfide from gypsum wallboard has become another issue.

In about 400 B.C, Plato said "necessity is the mother of invention". I never realized that Plato was talking to us, you and me, right here in this room. While we may not be the design engineers behind the machines, or the patent holder-of-record for any improvements, we do identify many of the equipment deficiencies, and our daily observations and suggestions to the equipment suppliers, become the upgrades of tomorrow.

As the industry has advanced from the old-style manual floor-sorting of cardboard, metals and wood, to a higher level of recovery, various mechanical screens and sorting systems, including air and water density separators, eddy current separators and plastics recovery through optical sorting, have been developed and installed.

Sorting and recycling just the low hanging fruit is no longer an acceptable industry barometer. The vast majority of C&D facility recyclers are not landfill disposal owner/operators. Our aversion to paying landfill disposal costs provides the impetus and "great equalizer" for advancing materials reuse and market-driven creatively. However, as I noted earlier, the regulatory regime and constant concerns about product quality, contamination levels and the nature of toxic materials that might have been used in the origin materials and manufacturing processes, are the natural obstacles that need evaluated by the industry in a fully transparent manner.

I will be the first to admit that I am not an expert on the minutia of the working of DEP's C&D regulations. I also do not possess a crystal ball on the national political scene that unfortunately drives, in part, the federal EPA and their regulatory regime. However, as a private entrepreneur, much like most of you, I do have years of sweat equity invested in the C&D field. I am here today to let you all know that our industry is not going away soon; and it serves many diverse opportunities that Americans are demanding more-and-more of each day. These valued services provide significant job opportunities and, in some cases, even "profits" for the corporations engaged in backstopping the risks of owning such enterprises.

Each of your individual challenges will be to select that segment of the industry that best fits your appetite for risk. Over the recent years, and for a myriad of environmental and social reasons, we have seen our industry advance further into traditional plastics recovery, vinyl siding recycling, gypsum wallboard separation and recycling, carpet recycling, ceiling tile recycling, and other salvage and constituent materials recovery. Each of these materials offers a “potential market” for your facility to explore, but, as most of you know, the economics are very specific to your geographic location and the transportation network needed to close the recycling loop.

But we all must continue to be market participants, and devote the time necessary to be part of the solution, and not part of the problem. A lot of attention these days is being spent discussing biomass and renewable energy. Regardless of the past environmental fights about the burning of C&D wood waste for example, the fact remains that C&D waste has a significant portion of high quality fuel constituents. Many waste conversion technologies have identified wood and other biomass as acceptable fuels, and market opportunities, will continue to be presented to this industry. When I first started getting involved with the C&D-recycling sector in the early 1990’s, the largest waste haulers were nowhere in sight. They tended to merely “hang out” around their landfills.

About 2 months ago I was speaking at a C&D conference in Columbia SC and a spokesperson from Waste Management indicated that they now have 15 C&D recycling plants that they own around the country. Republic, mainly through their Allied acquisition, now has a few as well. Waste Management in particular, has made a significant market penetration in the past 5 years. As we know, the color of their trucks is usually green, so naturally, I took his current facility number as a positive sign for our industry.

Having been a witness to our industry’s growth over the past 20 years, I do realize that, at times, we have all needed the faith of Mother Teresa, the wealth of Donald Trump, the wisdom of Plato and the insights of Thomas Paine to be successful.

Each of your C&D plants is like an independent island nation, but each of you, and your allies, must cooperate in some measure to be successful in the long run. We would not have won World War II without the full commitment and perseverance of all of our great allies at that time.

Having forums like this annual summit, having two dedicated C&D magazines, two annual national C&D conferences, and two pointed industry associations like the CMRA and the NDA, allow you to share both your frustrations and triumphs, and are critical to your business success. Your active participation in all these available resources, especially those specific to your region, cannot be overstressed in this ever-changing world, where decisions in Boston and

Concord NH, Washington D.C. and China, all impact your corporate results. For example, the recent rejection of the Keystone pipeline, which including the building of over 1,700 miles of steel pipe line, shorts a major opportunity for the potential marketing of recovered metal and scrap from both demolition projects and our C&D plants.

When I add up all of the C&D materials that are generated in the United States, I come to almost 350 million tons per year. While this is split many ways, with crushed concrete and asphalt pavement near 100 million tons per year, and the total waste generation of gypsum drywall and asphalt shingles (each around 10 million tons), the 150 million tons of mixed C&D waste, and each of the segregated waste constituents, provide significant Challenges and Opportunities to our industry, and each day, we continue to grow and learn how to address our unique business needs.

As another survivor story, you have John Adelman, the current President of CMRA and CEO of the CPRC Group in Southern Maine, reporting in the recent issues of C&D World magazine that his company has been receiving and processing both pre- and post-consumer shingles for more than 17 years. Coincidentally, GBB help develop the C&D business RFP for the City of Portland ME that eventually led to CPRC's selection as the operator marketer for that City at their current Riverside Recycling facility. I think that Ben Harvey, who I understand recently celebrated his 100th birthday, or at least he says that he feels that way some days, might also be a considered a C&D waste founding father as well.

The hot new TV series of last year and this year is called "Gold Rush", and set in the wilderness of Alaska, with the viewing audience able to witness the many pitfalls of mining gold in the Klondike. Each of us in this room has our own daily "Urban Ore Rush". We may not be trying to extract gold from the ground, but by being C&D processors and recyclers, we, on a similar daily basis, attempt to mine that which is delivered to us on a daily basis. When you open your facility gates each morning, you announce to the world that you are ready to take on the challenges of an essential industry niche, and ready to perform a great and needed environmental service for our country.

I thank you for your service to our industry and your time here today. Finally, with the Patriots – Ravens game this weekend, and being here in the Boston area, I must say "Go Pats", even if said without a Boston accent.

I now welcome any questions that you might have.